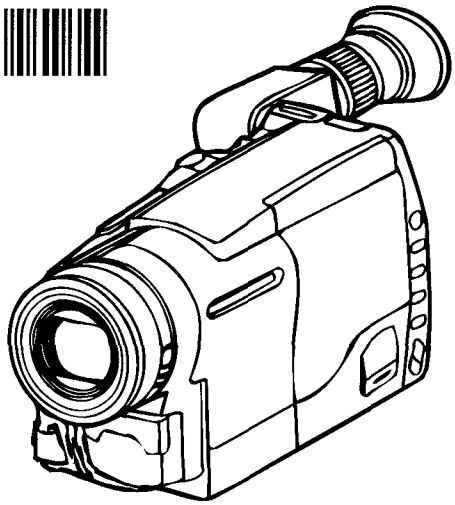
HITACHI

SERVICE MANUAL

V21020



TK | No.6806E

VM-E330E(R)/E340E
VM-E543LE/E545LE
VM-E548LE

AC Adapter/Charger **VM-ACE4E**

TH MECHANISM

This model uses a TH mechanism.
When servicing the TH mechanism, use this manual with the TH Mechanism Service Manual (No. 6406E). This manual includes the new exploded view in Chapter 4 and the changed sections from the previous manual (No. 6406E) in Chapter 7.

■ **USING THIS SERVICE MANUAL**

For Disassembly :

The disassembly procedure is the same as for the VM-E330E and VM-E535LE. Refer to the VM-E330E/H630E/E535LE/E635LE/H835LE Service Manual (No. 6714E).

For Electrical Adjustment :

This manual includes only the differences from the VM-E330E and VM-E535LE (VM-E635LE). For items not included in this manual, refer to the VM-E330E/H630E/E535LE/E635LE/H835LE Service Manual (No. 6714E).

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SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

8mm VIDEO CAMERA/RECORDER

March 1998 Image & Information Media Systems Division, Tokai

ENGLISH

C O N T E N T S

CHAPTER 1 GENERAL INFORMATION

SPECIFICATIONS (For VM-E340E)

■ General

Power requirements	7.2V DC
Power consumption	4.0 watts (when recording)
Operating temperature	0°C to 40°C
Operating humidity	< 80%
Storage temperature	– 20°C to 60°C
Dimensions	91(W) × 115(H) × 239(D) mm
Weight	Approx. 760g (without battery pack and cassette)

■ Video Recorder Section

Format	8 mm
Record/playback system	Two video record/playback heads
Video signal	PAL colour & CCIR monochrome signals 625 lines
Tape speed	SP: 20.05 mm/sec.
Video output	1.0 Vp-p, 75 ohm
Audio output	– 8 dBs, less than 1K ohm
Fast forward/rewind time	Less than 8 minutes with P5-90 cassette

■ Camera Section

Scanning	625 lines/50 fields/25 frames
Required minimum illumination	0.8 lux
Camera device	1/4" C.C.D
Lens diameter	46 mm

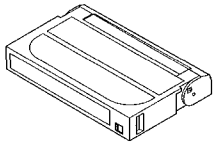
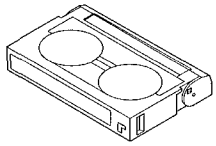
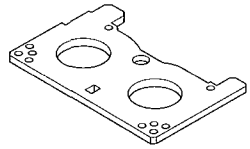
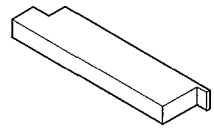
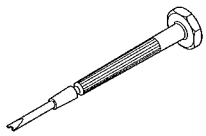
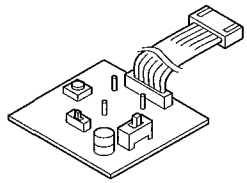
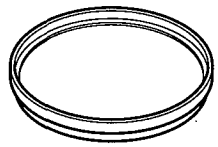
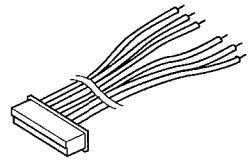
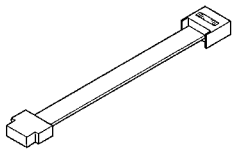
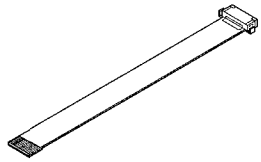
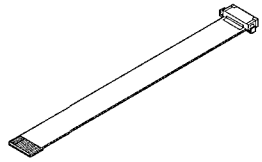
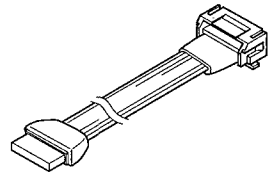
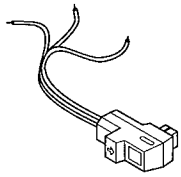
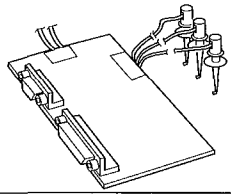
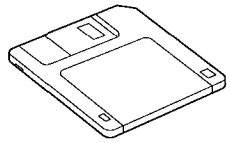
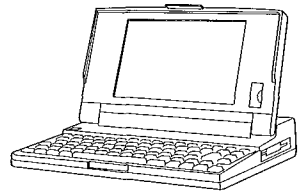
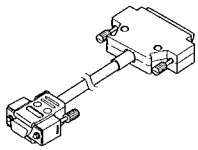
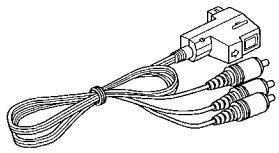
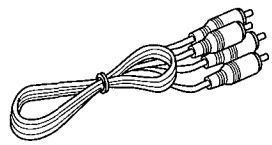
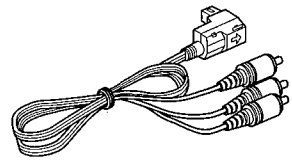
COMPARISON OF FEATURES

ITEM		VM-E330E/E535LE	VM-E330E(R)/E340E/E543LE/ E545LE/E548LE
GENERAL	Power Requirements	7.2V DC	
	Power Consumption	4.3 W [VM-E330E] 5.4 W [VM-E535E]	4.0W [VM-E330E(R)/E340E] 5.1W [VM-E543LE/E545LE/E548LE]
	Dimensions (W H D mm)	91 × 115 × 239 [VM-E330E] 104 × 115 × 239 [VM-E535LE]	91 × 115 × 239 [VM-E330E(R)/E340E] 104 × 115 × 239 [VM-E543LE/E545LE/548LE]
	Weight	Approx. 760 g [VM-E330E] Approx. 920 g [VM-E535LE]	Approx. 760 g [VM-E330E(R)/E340E] Approx. 920 g [VM-E543LE/E545LE/E548LE]
VIDEO	Format	8 mm	
	Record/Playback System	Two video record/playback heads	
	Video Signal	PAL colour & CCIR monochrome signal 625 lines	
	Tape Speed	20.05mm/sec	
	F.F/Rew Time	Less than 8 minutes with P5-90 cassette	
	Head Weel	40 mm	
	Basic Chassis Type	TH	
CAMERA	Scanning	625 lines/50 fields/25 frame	
	Required Minimum Illumination	0.8 lux	
	Camera Device	1/4" C.C.D	
	Lens Diameter	46 mm	
	Zoom Ratio	16 : 1 (4.0 - 64.0mm)	
	Aperture	F1.4	
	Zoom Speed	1 Speed	
FEATURES	Electronic Viewfinder (EVF)	CRT (Black & White)	
	Electrical Zoom Function	Yes (× 32)	
	INST. ZOOM Function	Yes (× 1.5)	
	Autofocus System	Video AF System	
	Program AE (Shutter Speed)	Yes (Programe AE only)	
	Titler	Yes (2 Line/1Page)	
	AV Input Function	No	
	S-Connector Output	No	
	Microphone	Monaural	
	Fade	Yes	
	Date Serch	Yes	
	Electronic Image Stabilizer (E.I.S)	No	Yes [VM-E545LE] No [VM-E330E(R)/E340E/E543LE/E548LE]
	Manual Focus	Yes (Auto/Manual selective)	
	LCD Display	Yes (3-inch) [VM-E535LE] No [VM-E330E]	Yes (2.5-inch) [VM-E543LE/E545LE/E548LE] No [VM-E330E(R)/E340E]
ACCES-SORY	AC Adapter/Charger	VM-ACE3E	VM-ACE4E
	Battery Pack	VM-BPL13	
	Remote Control	VM-RME311A	VM-RME411A

COMPARISON OF MAIN CONTROL ICs

ITEM		VM-E330E/E535LE	VM-E330E(R)/E340E/E543LE/ E545LE/E548LE
CAMERA (AUTOFOCUS)	CCD Sensor	ICX207 (IC1001)	
	Gyro (Vert.)	ENC-05EA-02 (IC1401)	CG-16DF0FU10251 (IC1401)
	Gyro (Horiz.)	ENC-05EA-02 (IC1402)	CG-16DF1FU10252 (IC1402)
	Gyro Amp	NJM062M-TE1 (IC1403)	
	Gyro Reset	TC4W66F (IC1404)	
	CDS/AGC & A/D Conv.	HD493322F (IC1101)	HD493322BF (IC1101)
	DSP	HG51CS035TE (IC1102)	HG73C012TE (IC1102)
	Drive Pulse Generator	µPD16510GR (IC1103)	
	D (Digital) -µP	HD6433042ST-E3 (IC1104)	HD6433042ST36F (IC1104)
	EEPROM	MX25S67MR (IC1105)	
	F Det./Iris Drive	µPC5023GS-105 (IC1201)	µPC5023GS-147 (IC1201)
	Zoom /Focus Motor Driver	MPC17A34ZVM (IC1301)	
CRT EVF	Video Amp/Vertical & Horizontal Deflection	HA118121T (IC2001)	
SYSTEM CONTROL (POWER) & SERVO	System/Servo Control µP	CXP87240-117R (IC901)	CXP87240-136R (IC901)
	Back-up Det	S84233FS (IC902)	
	Character Gen.	BU6229FV (IC904)	BU6294FV (IC904)
	Level Shift	SN74AHCT126PW (IC905)	
	ATF	UPC5023GS-122-E1 (IC601)	
	Cylinder Motor Drive	LB1950V-TLM (IC631)	
	Loading Motor Drive	BA6417F (IC671)	
	Capstan Motor Drive	LB1881 (on the capstan motor)	
	PWM	BA9735KV (IC551)	
LUMA/CHROMA & AUDIO	VideoHead Switch	HA118189MPER (IC101)	
	Phase EQ/FM Peak	µPC5023GS-101-E1 (IC102)	
	Luma/Chroma Process	HA118192AF (IC201)	
	1H Delay	CXL5516N (IC202)	
	CCD 1H Delay	CXL5507M (IC203)	
	Video Amp	µPC5023GS-104-E1 (IC204)	
	Skew Compe	CXA2003N (IC301)	
	Monaural Audio Process	HA118193F01 (IC401)	LA7458W (IC401)
LCD DISPALY	LCD Video Process	IR3Y29AM (IC5301)	IR3Y18A (IC5301)
	LCD Reg.	TL5001CD (IC5401)	
	LCD Reg.	TL5001CD (IC5501)	
	LED Drive	NJM2406F (IC5502)	
	LCD Drive	LZ95NA1 (IC5601)	CM7013L2 (IC5601)
	Pulse Gen.	NJM3414 (IC5602)	
	Pulse Gen	Not Provid	NJM2107F (IC5603)

JIGS AND TAPES FOR ADJUSTMENT

1. Alignment Tape Color Bar/400Hz (20HSC-3) No. 7099232 	**2**. Cassette Torque Meter SRK-8T-232 : No. 7099236 SRK-8T-212 : No. 7099402 	**3**. Master Plane No. 7099237 	**4**. Reel Disk Height Jig No. 7099238 
5. Special Driver No. 7099239 	**6**. ATF-R Jig *(*1, *2)* No. 7099461 	**7**. C12 Light Balance Filter 46mm Ø No. 7099369 	**8**. 10-Pin Extension Cable No. 7069183 
9. 2-Pin Extension Cable No. 7069038 	**10**.10-Pin Extension Cable No. 7069039 	**11**. 9-Pin Extension Cable No. 7069040 	**12**. 20-Pin Extension Cable No. 7069112 
13. DSP AV Output Jig No. 7099456 	**14**. DSP-R Jig No. 7099448 	**¤15.** Adjustment Floppy Disk No. 7069197 	**§16**. Personal Computer 
§17. Personal Computer Cable 9-PIN or 25-PIN (RS232C Straight type) 	**18**. AV INPUT CABLE No. 5860771 	**#19**. AV Output Cable *(*3)* (For US Pin Jack) 	(For 20 Pin AV Jack) 

For marks :

¤: New jigs and tools §: Goods on the Market $: Optional Accessory #: Accessory

Caution for jigs :

**1.* Always set SW3 on the ATF-R jig to ON.

**2.* The ATF jig (No.7099386) can also be used in place of ATF-R jig to adjust this model.

**3.* Either the monaural or stereo AV input/output cable can be used.

**4.* To supply video and audio signals, the AV input cable must be modified. (See next page for how to modify it).

HOW TO USE THE EXTENSION CABLE

NAME OF JIGS	PARTS No.	HOW TO USE
10-Pin Extension Cable	7069183	Cable to power the camera/recorder after the case is removed. [Pin 1 and 2: Positive, Pin 6 and 7: Negative] Power supply cable for power shut off level adjustment. **NOTE**: It it is used for the power shut off level adjustment, short pins 3 and 5 to pins 6 and 7 (GND).
2-Pin Extension Cable	7069038	Installed between the VCA circuit board and loading motor.
10-Pin Extension Cable	7069039	Installed between the VCA circuit board and cylinder. **NOTE**: Using this extension cable causes noise to occur in the playback picture. This cable is used to check voltage and waveforms. Check the picture quality in the regular connection state.
9-Pin Extension Cable	7069040	Installed between the VCA circuit board and capstan motor.
20-Pin Extension Cable	7069112	Installed between the SP and VCA circuit boards.

Procedure to modify the AV input cable

Although models do not have AV input function, you can modify the AV input cable so that video and audio signals can be input. For adjustment and performance check, modify the AV input cable by following the procedure below, to input signals:

Caution 1: Do not modify the AV input cable for purposes other than adjustment or performance check.

Caution 2: Modify the AV input cable correctly. If an improperly modified cabl e is connected to a camcorder, it will result in malfunctions.

Caution 3: Since Hi-8 models have an AV input function, use an unmodified AV i nput cable to input the video and audio signals.

Modify the AV input cable.

Change the connection of pin 13 of the AV input cable from ground to pin 2 (DC5V). (After checking that pin 13 and ground are not connected, connection of pin 13 to pin 2 (DC5V).)

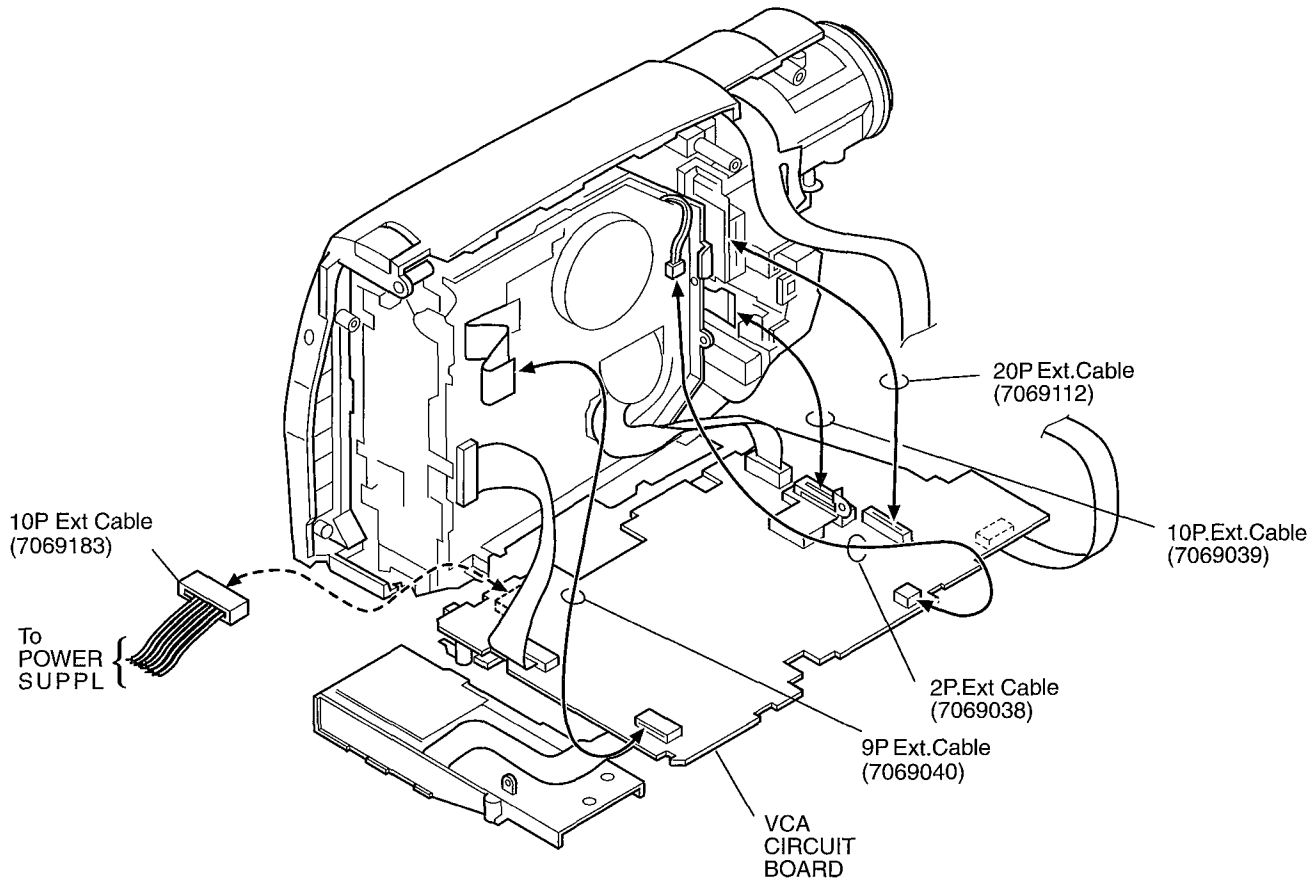


Fig.1-1 Extension Cable Connection Diagram

SERVICE MANUAL ABBREVIATION LIST

A	
ACC	Automatic Color Control
ADD	Adder
ADRS	Address
AF	Automatic focus (Autofocus)
AFC	Automatic Frequency Control
AGC	Automatic Gain Control
AGC KILLER	AGC Killer Voltage
AI	Automatic Intelligence
AIC	Automatic Iris Control
ALC	Automatic Level Conrol
AMP	Amplifier
APC	Automatic Phase Control
ASBL	Assemle (Phase Matching)
AUD.	Audio
AUX	Auxiliary
A/D	Analog-to-Digital Converter
A.DUB	Audio Dubbing
B	
B (BLU)	Color Signal Blue
BATT.	Battery
BF	Burst Flag
BG	Burst Gate or Back Ground
BGP	Burst Gate Pulse
BLK	Blanking
BPF	Bandpass Filter
BUF.	Buffer Amplifier
B-YL	Color Difference Signal B-YL
C	
C (CHROMA)	Chrominance Signal
CAM	Camera
CAPST.	Capstan
CARRI.	Carrier
CATV	Cable TV
C.BLK	Composite Blanking
CCD	Charge Coupled Device
CDS	Correlated Double Sampling
CG	Character Generator
C.FG (CFG)	Capstan Frequency Generater
C.FREE RUN	Capstan Free Run
CH (Ch or ch)	Channel
CHARA.	Character
CHD	Camera Horizontal Drive Pulse
C.MEMORY	Counter Memory
CNR	Chroma Noise Reducer
COM.	Common
COMPA.	Comparator
COMPE.	Compensator
COMP-EXP	Compressor-Expander
COMPO	Composite
CONT.	Control
CONV.	Converter
COUNT.	Counter
CP	CP
C.PAUSE	Camp Pulse
C/R	Capacitor/Resistor
C.RESET	Countor Reset or Camera Reset

C	
C.REVERSE	Count Reverse
CS	Communication Signal
CST	Cassette
C.SYNC	Composite Synchronizing Signal
CTL	Control Track Pulse (Control)
CYL	Cylinder
D	
D (Digital)	Digital
DA	Double Azimuth
D/A	Digital to Analog Converter
D-D	Direct Drive
DEEMPHA.	Deephasis
DEF	Deflefction
DEMOD.	Demodulator
DET	Detector
DIFF. AMP	Differential Amplifier
DISP.	Display
DL	Delay Line
DO	Dropout
DOC	Dropout Compensator
DSP	Digital Signal Processor
D/W	Dark/White
D.ZOOM (DZ)	Digital Zoom
E	
EAROM (EA-ROM)	Electrically Alterable Read Only Memory
EEPROM (EEP-ROM)	Electrical Erasable Proframmed
E-E	Electronic-to-Electronic
EIS (E.I.S.)	Electronic Image Stabilizer
EMPHA. (EMPH)	Emphasis
EQ	Equalizer
ESS	Supply End Sensor
EST	Take-up End Sensor
EVF	Electronic Viewfinder
EXT.	External
E.ZOOM	Electronic Zoom
F	
F.ADV	Frame Advance
F/V	Frequency-to-Voltage Converter
FB	Feed back
FE	Full Erase
FF (F/F)	Flip Flop
F.FWD	Fast Forward
FG	Frequency Generator
FM	Frequency Modulation
FREQ.	Frequency
fsc	Sub Carrier Frequency
FWD	Forward
G	
GEN.	Generator
GND	Ground
H	
H (HORIZ.)	Horizontal
HB	Hi-Band

H	
HBF	Horizontal Burst Flag
HD	Horizontal Drive
Hi-Fi	High Fidelity
HPF	High-pass Filter
I	
IF	Intermediate Frequency
INDI.	Indicator
INST.	Instant
INT.	Internal
INV.	Inverter
I/O	In/Out (Input/Output)
IR	Infrared Rays
L	
LB	Low-Band
LCD	Liquid Crystal Dissplay
LIN.	Linear
LM	Loading Motor
LNC	Line Noise Canceller
LOG	Logarithm
LP	Long Play
LPF	Low-pass Filter
LUMA	Luminance
L/R	Left/Right
M	
MAN	Manual
M.BRAKE	Main Brake
M.CUT	Monitor Cut
MEM.	Memory
MIC	Microphone
MIX	Mixer
MMV	Monostable Multivibator
MOD.	Modulator
M.STATE	Mechanism State
M.STOP	Memory Stop
N	
NEG	Negative
NFB	Negative Feed Back
NOR. (NORM)	Normal
NR	Noise Reduction
O	
OB	Optial Black
OSC	Oscillator
OSD	On-Screen Display
P	
PB (PLAY)	Playback
PG	Pulse Generator
PLL	Phase Locked Loop
POS.	Positive
PROG.	Program
PROT.	Protector
PWM	Pulse Width Modulation
R	
R (RED)	Color Signal Red
RAM	Random Access Memory
REC	Record
RECT.	Rectifier

R	
REF.	Reference
REG.	Regulator
REV	Review
REW	Rewind
RF	Radio Frequency
ROM	Read Only Memory
RSS	Supply Reel Sensor
RST	Take-up Reel Sensor
R-YL	Color Difference Signal R-YL
S	
SAW	Sawtooth Signal
SC1 (0°)	3.58MHz Subcarrier Signal 1 (0-degree Phase Shifted)
SC2 (90°)	3.58MHz Subcarrier Signal 2 (90-degree Phase Shifted)
SEPA. (SEP)	Separator
S/H	Samle and Hold
SP	Standard Play or Speaker
S.REEL	Supply Reel Sensor
SRCH	Search
SRV	Servo
STABI.	Stabilizer
S.TRACK	Slow Tracking
STBY	Standby Mode
S-VHS	Super VHS
SW	Switch
SW30Hz (15 or 25Hz)	30Hz Head Switching Pulse (15 or 25Hz Head Switching Pulse)
SYNC	Synchronizing signal
SYS.CON	System Control
T	
T (TELE)	Telephoto Angle
T.BRAKE	Take-up Brake
TP	Test Point
T.REEL	Take-up Reel Sensor
TRS	Transfer
V	
V (VERT.)	Vertical
V.AGC	AGC Voltage
VCO	Voltage Controlled Oscillator
VD	Vertical Drive
V.DUB	Video Dubbing
VHS	Video Home System
VOL.	Volume
VP	Voltage Pulse
VCXO	Voltage Controlled Crystal Oscillator
W	
W (WIDE)	Wide Angle
WHT	Color Sifnal White
WHD	Wide Horizontal Drive
WHT BAL.	White Balance
Y	
Y	Luminance Signal
Y/C	Luminance/Chrominance
YEL (Ye)	Color Signal Yellow
YL	Luminance Signal (Low Component)

LEADLESS (CHIP) COMPONENT IDENTIFICATION

1. Leadless Transistor

The part name of a leadless transistor is indicated by a code on its surface, using one letter, one letter and one numeral,two letters, two letters and one numeral, two numerals, two numerals and one letter, three letters, or four letters.

Note: There are transistors with the same code but different part names, or with the same part name but different codes. Refer to the parts lists to finally identify a transistor.

CODE	PART NAME	CODE	PART NAME
Leadless (Chip) Transistor			
3925	2SC3925	BQ	2SB709A
1CQ	2SCB902	BR	2SC4081R
1D	2SC3127	BR	2SC2412K
1DS	2SD1328S	BR	2SC4617
1DT	2SD1328	BS	2SC2412K
1R	2SB970TX	C-7	2SA811
2BQ	2SK374PQ	C1G	KSC1623
2BR	2SK374QR	CB	2SC3646
2Y	2SC3757	CC	2SA1122C
2YQ	2SC4691	CC	2SC3647T
3N	2SK620	CC	2SC3647
4N	XN5601	CD	2SA1122D
4Q	XN1B301	CE	2SA1122E
4R	XN1C301	CK	2SD999
5C	XN4601	CP	2SC4097
5C	XP4601	CQ	2SC2411K
5H	XP4501	CR	2SB710
5H	XN4501	CR	2SC2411
5K	XP4401	CR	2SB1219
5K	XN4401	D16	2SC1622A
5L	XN5501	D17	2SC1622A
5N	XN6501	D18	2SC1622A
5O	XN6401	DB	2SD1766
5R	XP1501	DE	2SC2463
5R	XN1501	DF	2SD1623
5S	XN1504	DF	2SD1898
5V	XN1401	DG	2SD1624
5W	XN2501	DK	2SB798
5X	XN4504	EC	2SA1022
7R	XN2401	F-2	2SC1009F2
7S	XN1601	F-3	2SC1009F3
AA	2SD1757K	F-4	2SC1009F4
AKQ	2SA1738	FC	2SC2619
AKQ	2SA1806	FR	2SA1774
AL	2SA1791	FR	2SA1037K
AM	2SC4656	FR	2SA1576R
AO	2SB709AQR	FS	2SA1037K
AQ	2SB709AQ	GC	2SC2734
AQ	2SB766	GM	3SD1615
AR	2SB1462	HQ	2SA1036K
AR	2SB766	IC	2SC3016
AR	2SB709ARS	IRD	2SA1484
AR	2SB1218R	IS	2SB792S
AS	2SB766	IT	2SB792T
AS	2SB709AS	L-4	2SC1623L4
B3	2SC1621B3	L-5	2SC1623L5
B4	2SC1621B4	L-6	2SC1623L6
BC	2SB1188	L-6	2SC2812L6
BD	2SB1121	L-7	2SC2812L7
BE	2SB1260	L5	MMBC1623L5
BF	2SB1123	L6	MMBC1623L6
BF	2SB1308	LB	2SC2462B
BG	2SB1124	LC	2SC2462C
BH	2SB1001	LD	2SC2462D

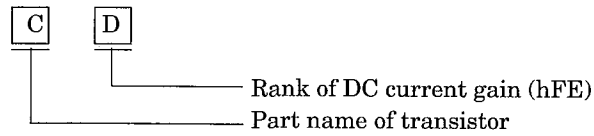
CODE	PART NAME	CODE	PART NAME
Leadless (Chip) Transistor			
LR	2SC2412KLN	T2	IMT2
M-5	2SA812	UD	2SC2404
M-6	2SA1179	ZS	2SD874S
MC	2SA1052MC	VR	2DS968A
MD	2SA1052MC-D	W1	FMW1
N3	2SC1653	W10	FMW10
ND	2SD1306ND	W2	FMW2
NE	2SD1306NE	W3	FMW3
PD	2SA1171D	WR	2SD602
PS	2SD814	X1	UMX1
QB	2SC2520QB	X1	IMX1
QC	2SC2620QC	X2	IMX2
QO	2SC2714	Y1	FMY1
R22	2SC4226	Y12	2SA1464
R22	2SC3356	Y25	NTM3906
R32	2SC4227	Y3	FMY3
R34	2SC3583	YCD	2SK197
R42	2SC3585	YI	2SA1666
RB	2SC2618RB	YQ	2SD601YQ
RC	2SC2618RC	YR	2SD601YR
RK	2SC3357	YR	2SD1819R
S1	FMS1	YR	2SD2216
S2	FMS2	YS	2SD601YS
SC	2SA1121	Z1	IMZ1
SO	2SA1162	Z2	IMZ2
SP	2SC3082K	ZO	2SD874T
T1	IMT1	ZQ	2SD601A
T1	UMT1	ZR	2SD874R
Digital Transistor			
3	DTC143TK	6C	UN9113
4	DTC114TK	6S	NP4113
6	DTC144TK	8B	UN5212
13	DTA143EK	8C	UN9213
14	DTA144EK	8C	UN2213
15	DTA124K	8S	XP4213
15	DTA124EU	9L	XP1213
16	DTA144EU	9L	XN1213
16	XDA144EK	A1	FMA1
16	DTA144EE	A1	UMA1
23	DTC143EK	A2	FMA2
24	DTC114EU	B2	UMB2
24	DTC144EK	B2	IMB2
25	DTC124EU	C2	FMC2
25	DTC124K	C5	FMC5
26	DTC144EE	D2	IMD2
26	DTC144EU	F52	DTB123
26	XDC144EK	G1	FMG1
33	DTA143XK	G2	FMG2
43	DTC143XK	G21	DTD113ZK
52	DTA123YK	G5	FMG5
60	UN511F	H03	DTC343TK
64	DTC114YK	H2	IMH2
80	UN521F	H2	UNH2
4P	XN1A312T	H27	DTC363EK
6B	UN5112	RO4	KSR1104
6C	UN2113	R31	FP1L2Q
FET			
30	2SK621	KB	2SK323
1FQ	2SK321FQ	WS	2SK322T
1FR	2SK321FQR	WT	2SK322T
1KP	2SK316	X15	2SK425
2BQ	2SK663	X4	2SK94
DY	2SK1579	XAF	2SK980FG
JO	2SK208	YC	2SK197YC
K	3SK166	YD	2SK197YD
K4	2SK160K4	YE	2SK197YE
K5	2SK160K5	ZD	2SK217ZD

(1) Identification with two letters

Use this code and the following chart for transistor identification.

Example :

Code	Part name
CD	2SA1122D
LD	2SC2462D

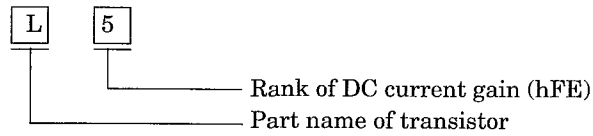


(2) Identification with one letter and one numeral

Use this code and the following chart for transistor identification.

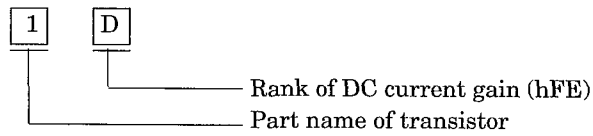
Example :

Code	Part name
L5	2SC1623(5)
L6	2SC1623(6)



Example :

Code	Part name
1D	2SC3127D



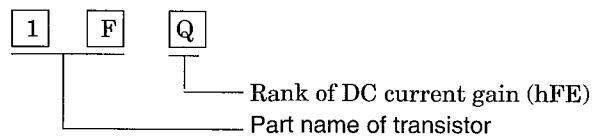
Note: Codes S1,S2,T1,W1,W2,W3,X1,Y1,Y3,Z1 and Z2 encode only the part names.

(3) Identification with one numeral and two letters

Use this code and the following chart for transistor identification.

Example :

Code	Part name
1FQ	2SK321Q

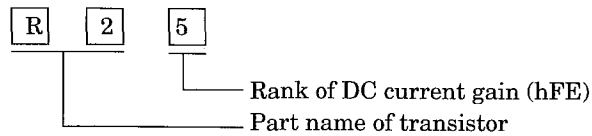


(4) Identification with one letter and two numerals

Use this code and the following chart for transistor identification.

Example :

Code	Part name
R25	2SC3356

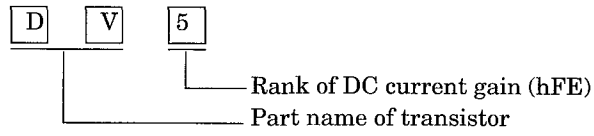


(5) Identification with two letters and one numeral

Use this code and the following chart for transistor identification.

Example :

Code	Part name
DV5	2SD596

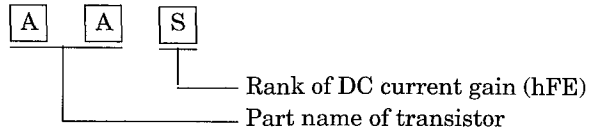


(6) Identification with three letters

Use this code and the following chart for transistor identification.

Example :

Code	Part name
AAS	2SD1757KS



2. Leadless Diode

The part name of a leadless diode is indicated by a code on the surface, using one letter and one numeral,two letters, two letters and one numeral, two numerals and one letter, or three numerals. Use this code and the following table to identify the part name of a diode.

Note: Refer to the parts lists to finally identify a diode.

CODE	PART NAME	CODE	PART NAME
Diode			
0	HVU300A	3D	RB715F
1.0	ISV201	3.0L	MA3030L
2.0	MA3020	3.6L	MA3036L
5.1	MA3051L	3.9L	MA3039L
5.1	MA3051M	4.3H	MA3043H
6.8	MA3068	4.3L	MA3043L
6.8	MA3068M	4.3M	MA3043M
7.5	MA3075L	4.7L	MA3047L
8.2	MA3082M	4.7M	MA3047M
9.1	MA3091	5.1H	MA3051H
20	HZM6	5.1L	MA3051L
24	ISV221	5.1M	MA3051M
27	RD2.7M B	5.6M	MA3056M
30	RD3.0M B	6.2L	MA3062L
51	RD5.1M B2	6.2M	MA3062M
56	RD5.6M B	6.8H	MA3068H
91	RD9.1M B	6.8L	MA3068L
102	RD10M B2	6.8M	MA3068M
122	RD12M B2	6.8M	MA3068
163	RD16M B3	7.5H	MA3075H
182	RD10M B2	7.5L	MA3075L
271	RD2.7M B	8A	UN221D
272	D2.7M B2	8.2H	MA3082H
301	RD3.0M B	8.2M	MA3082M
362	D3.6M B2	9.1M	MA3091M
391	D3.9M B1	9.1M	MA3091
512	RD5.1M B2	10L	MA3100L
561	RD5.6M B	10M	MA3100M
621	RD6.2M B1	11L	MA3110L
681	RD6.8M	12M	MA3120M
683	RD6.8M B3	13H	MA3130H
911	RD9.1M B	18M	MA3180M
2.7H	MA3027H	36M	MA3360

CODE	PART NAME	CODE	PART NAME
Zener Diode			
1A	MA110	M3A	MA199
A3	1S2835	MC	MA153
A4	HSM2836C	MC	MA143
A5	1S2837	MH	MA141K
A6	HSM2838C	MH	MA151K
B	SB0505CP	MH	MA152K
B64	SFPB64	MI	MA132K
B74	SFPB74	MN	MA141WA
BE	1SV172	MN	MA152WK
C1	HSM88S	MN	MA132WA
C2	HSM276S	MO	MA152WA
C3	1SS226	MO	MA133
C4	HSM88WK	MP	MA151WK
F7	KV1470	MT	MA141WK
H5	HVM14	MT	MA141WK
J	SB07-03C	MU	MA132WK
K	DA221	MU	MA151WA
M1A	MA159	N	DAN222
M1C	MA158	N	DAN202T
M1M	MA721	NU	MA152WK
M1N	MA713DAT	P	DAP202T
M1P	MA714	S4	DIFS4
M2A	MA122	SA	SB10-05P
M2B	MA123	Z	DA106K

3. Leadless Resistor

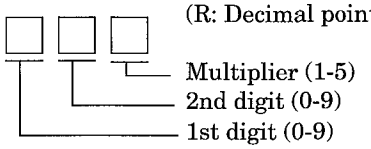
The resistor value is indicated on its surface, using three numerals, or one letter and one numeral.

(1) Identification with three numerals

Read this code following the same procedure as when reading the color code on discrete resistors.

Example:

Code	Value
330	33 × 100 = 33 ohms
561	56 × 101 = 560 ohms
123	12 × 103 = 12K ohms
1R2	1 + 0.2 = 1.2 ohms



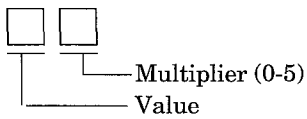
(2) Identification with one letter and one numeral

Use this code and the following chart for resistor identification.

Letter	Value	Letter	Value	Letter	Value
A	1	J	2.2	S	4.7
C	1.2	L	2.7	U	5.6
E	1.5	N	3.3	W	6.8
G	1.8	Q	3.9	Y	8.2

Example:

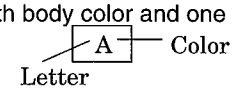
Code	Value
A1	1 × 101 = 10 ohms
G2	1.8 × 102 = 180 ohms
L3	2.7 × 103 = 2700 ohms
S4	4.7 × 104 = 47K ohms
W5	6.8 × 106 = 680K ohms



4. Leadless Capacitors

The capacitor value is indicated on its surface, using body color and one letter, or one letter and one numeral.

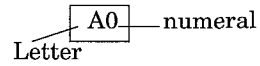
(1) Identification with body color and one letter



Body Color	Letter	Value	Body Color	Letter	Value
Red	A	1(PF)	Blue	G	180(PF)
	C	2		J	220
	E	3		L	270
	G	4		N	330
	J	5		Q	390
	L	6		S	470
	N	7		U	560
	Q	8		W	680
	S	9		Y	820
Black	A	10(PF)	White	A	0.001(μF)
	C	12		E	0.0015
	E	15		J	0.0022
	G	18		L	0.0027
	J	22		N	0.0033
	L	27		S	0.0047
	N	33		W	0.0068
	Q	39	Green	A	0.01(μF)
	S	47		E	0.015
	U	56		J	0.022
	W	68		N	0.033
	Y	82		S	0.047
Blue	A	100(PF)		U	0.056
	C	120		W	0.068
	E	150		Y	0.082
			Yellow	A	0.1(μF)

Example :	Color	Letter	Value
	Red	A	1PF
	Black	A	10PF

(2) Identification with one letter and one numeral



Letter/Numeral	Value	Letter/Numeral	Value
A0	1(PF)	A2	100(PF)
H0	2	C2	120
M0	3	E2	150
d0	4	G2	180
f0	5	J2	220
m0	6	L2	270
n0	7	N2	330
t0	8	Q2	390
y0	9	S2	470
A1	10(PF)	U2	560
C1	12	W2	680
E1	15	Y2	820
G1	18	A3	0.001(μF)
J1	22	E3	0.0015
L1	27	J3	0.0022
N1	33	N3	0.0033
Q1	39	S3	0.0047
S1	47	W3	0.0068
U1	56	A4	0.01(μP)
W1	68	E4	0.015
Y1	82	J4	0.022
		N4	0.033
		S4	0.047
		U4	0.056
		W4	0.068
		A5	0.1

Example :

Letter/Numeral	Value
A0	1PF
A1	10PF

5. Leadless Jumper

The leadless jumper indicated as shown below.

MAINTENANCE/INSPECTION PROCEDURE

1. Required Maintenance

The recording density of a VCR is much higher than that of an audio tape recorder. VCR components must be very precise to ensure compatible with other VCRs. If any of these components are worn or dirty, the symptoms will be the same as if the part is defective. To ensure a good picture, periodic inspection and maintenance, including replacement of worn-out parts and lubrications, is necessary.

2. Scheduled Maintenance

Schedules for maintenance and inspection are not fixed because they vary greatly according to the way in which the customer uses the VCR, and the environment in which the VCR is used. But, in general home use, a good picture will be maintained if the inspection and maintenance is done every 500 hours. Table 1 shows the relation between time used per day and inspection period.

Table 1

	When inspection is necessary		
Average hours used per day	About 6 months ↓	About 9 months ↓	About 18 months ↓
One hour			
Two hours			
Three hours			

3. Check before starting Repairs

The faults occurring in the playback picture as shown in Table 2 can be remedied by cleaning and oiling. Check the need for lubrication and the conditions of cleanliness in the unit. Check with the customer to find out how often the unit is used. If from that you determine that the unit is ready for inspection and maintenance, check the parts shown in Table 2.

Table 2

Phenomenon	Inspection Location
Poor S/N, no color	Dirt on video head or worn video head
Tape does not run or tape is slack	Dirt on pressure roller, cylinder or in tape transport system
Vertical jitter	Dirt on video head or in tape transport system
Low volume or sound distorted	Dirt on video head or worn video head

4. Tools Needed for Inspection and Maintenance

(1) Head cleaning kit
(2) VCR oil and grease (Table 3)
(3) Alcohol
(4) Gauze
(5) Cleaning tape 〔Maxell 8M-CL MCA (dry type)〕

Table 3 Locations for Greasing and Oiling

Name	Oil or Greasing Location
Sonic Slidas Oil (#1600)	Oil low-speed rotating sections
Froil (G31-SA)	Lubricate metal or molded section under light load
Molicoat (PG-641)	Lubricate metal or molded sections under light load
Lock paint	Fix adjustment screws and nuts.

5. Maintenance Procedures

5-1 Cleaning

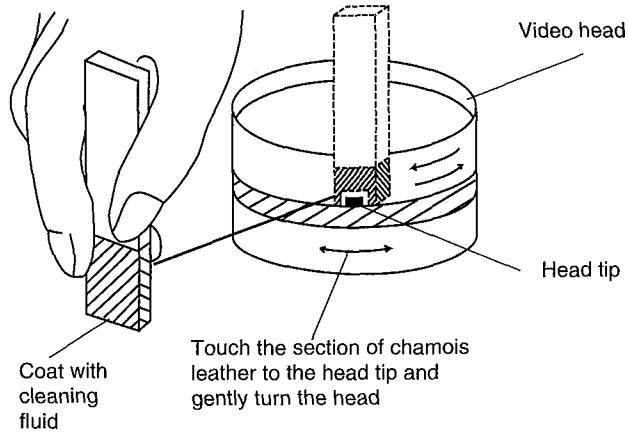
(1) Cleaning video head

First use a cleaning tape. Be sure to use the specified cleaning tape and read its instruction sheet carefully before using it. If dirt on head is too stubborn to remove by tape, use the cleaning kit. Moisten the cleaning stick with cleaning fluid at the point indicated. Touch the stick to the head tip and gently turn the head (rotating cylinder) to the right and left. (Do not move the stick vertically and make sure that only the chamois leather on the stick comes into contact with the head. Otherwise, the head may be damaged.) Thoroughly dry the head. Then test run a tape. If cleaning fluid remains on the video head, the tape may be damaged when it comes into contact with the head surface.

(2) Cleaning the tape transport system and drive system, etc.

Wipe with gauze moistened with alcohol.

Notes: 1) The tape transport system is the system which comes into contact with the running tape. The drive system consists of those parts which run the tape.
2) Make sure that during cleaning you do not touch the tape transport system with the tip of a screwdriver and that no force is applied to the system that could deform it.



5-2 Lubrication

(1) Guide lines for lubricating with oil

Use the oiler to apply one or two drop or Sonic Slidas oil. Make sure not to use too mach oil because it may spill over or leak out coming into contact with rotating parts and causing slippage or other problems. If too much oil is applied, wipe clean with a alcohol.

(2) Periodic oil lubrication

Lubricate the specified locations only when replacing components. Refer to the exploded views for the lubricating locations.

5-3 Greasing

(1) Greasing guide lines

Apply grease Froil or Molicoat, with a stick or brush. Do not use excess grease. It may come into contact with the tape transport or drive system. Wipe any excess and clean with gauze moistend with alcohol.

(2) Periodic greasing

Grease the specified locations only when replacing components. Refer to the exploded views for the greasing locations.

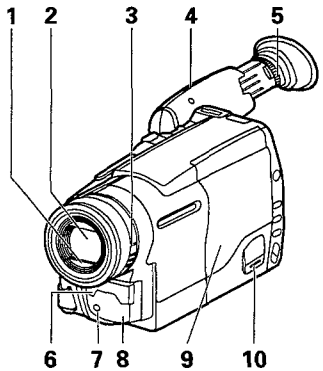
Table 4 Parts to be Maintained/Inspected and Maintenance/Inspection Schedules

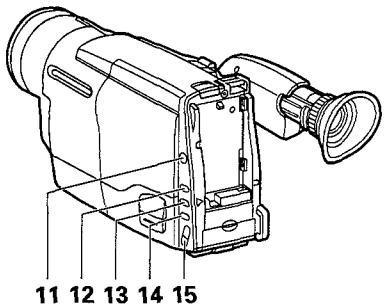
Caution: The following table does not apply to all units. The maintenance/inspection schedules depend on how the unit is used and the environment in which it is used.

Component \ Hours	500	1000	1500	2000	2500	3000
Video heads (cylinder assembly)	C	C／R	C	C／R	C	C／R
Supply guide roller	C	C	C	C	C	C
Supply guide pole	C	C	C	C	C	C
Take-up guide roller	C	C	C	C	C	C
Pull-out pole	C	C	C	C	C	C
Tension pole	C	C	C	C	C	C
Tension band		R		R		R
Supply reel disk	C	C	C	C／R	C	C
Take-up reel disk	C	C	C	C／R	C	C
Pressure roller	C	C	C	C／R	C	C
Impedance roller	C	C	C	C	C	C
Capstan belt				R		
Reel drive idler				R		
Capstan shaft (capstan motor)	C	C	C	C／R	C	C
Loading motor				R		

C : Cleaning
R : Parts replacing

CONTROLS AND FUNCTIONS





1. Lens Door
Slide the lens door opener to open and close the lens door. To protect the lens, keep the lens door closed when not recording.

2. Lens
F1.4 (4 ~ 64 mm) 16× power zoom lens features with auto focus and auto iris functions.

3. Lens Door Opener
Slide the opener to open and close the lens door. Align with OPEN to open the lens door for recording. Align with CLOSE to close it.
Hold down the small button in the opener as you slide it to CLOSE. However, you need not hold it down to slide the opener to OPEN.

4. Electronic Viewfinder

5. Diopter Control
To use the electronic viewfinder, turn this control for your optimum focus adjustment.

6. Microphone
Sensitive to sounds coming from the direction in which the camera is pointed.

7. Record Indicator
This indicator lights up to indicate that the camera/recorder is recording.

8. Infrared Ray Receiving Section
Receives infrared rays from the remote control unit.

9. Cassette Holder
Slide the EJECT switch to open the cassette holder. Be aware of the cassette direction when inserting.
NOTE: Power source must be connected to open the cassette holder.

10. Cassette Holder Close Button
CAUTION: Be sure to press this button to close the cassette holder. Otherwise, the tape may become slack and may be damaged.

11. INST. ZOOM (Instant Zoom) Button
Use this button to magnify the image being recorded 1.5 times momentarily.

12. D.EFFECT Button
Use this button to add special effects to your recording. You can select five modes — 16×9 mode, negative/positive mode, ×200 digital zoom mode, half-mirror mode and mosaic mode.

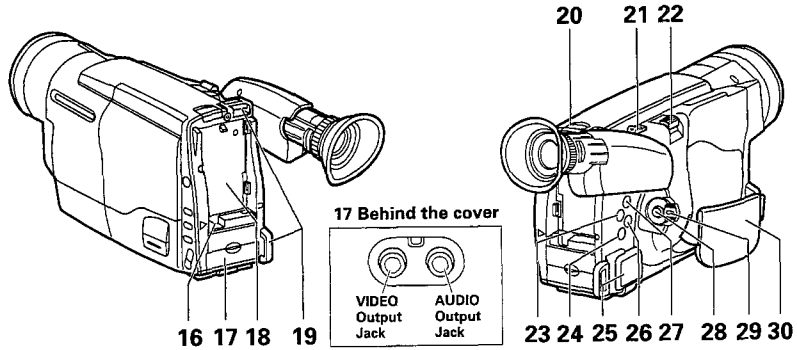
13. FADE Button
During recording you can add a professional touch to your recordings by fading in and out of the scenes. You can select the four fade modes — the white fade, wipe fade, zoom fade and black-and-white fade.

14. DATE/DISP. Button
When the CAM/OFF/VIDEO switch is set to CAM, this button can be used as the DATE button; set the date and time, and select the date display you want to record. In the VIDEO mode, the DATE/DISP button is used as the DISPLAY button.
NOTE: Be sure to insert the clock battery before setting the date and time or creating a title.

15. FOCUS Control Buttons
Press these buttons simultaneously to switch between automatic and manual focusing.
When "FOCUS" is not displayed in the viewfinder, focusing is automatic.
If these buttons are pressed at the same time and "FOCUS" appears, the camera/recorder enters the manual focus mode. For manual focusing, press the ▲ or ▼ button to bring the subject into focus.

16. DC IN Jack
When using the AC adaptor/charger, connect one end of the DC cord (provided) to this jack and the other end to the DC OUT jack of the AC adaptor/charger. When using the car battery cord (optional), connect this jack and the DC OUTPUT jack of the car battery cord.

17. AUDIO/VIDEO Output Jacks (Behind the cover)
You can use the audio/video output cable (provided) to connect this jack to a TV when viewing the playback picture on the TV, etc.
- Connect the yellow plug of the audio/video cable to the yellow jack (VIDEO OUT) and the white plug to the white jack (AUDIO OUT).



18. Power Supply Attachment Section
Attach the battery pack (provided) here.

19. Shoulder Strap Slots
Attach a shoulder strap here.

20. BATTERY EJECT Lever
Releases the battery attached to camera/recorder.

21. EJECT Switch
Operates with the CAM/OFF/VIDEO switch either on or off, if a power source is connected to the camera/recorder.

22. Power Zoom Control
This control performs zooming electrically.
"W": Picture becomes wider gradually.
"T": Picture becomes telescopic gradually.

23. PLAY Button
Used for playback of tape.
NOTE: When the camera/recorder is in record/pause (stand-by) mode, pressing and holding this button will play the tape at normal.

24. STOP Button
The STOP button is used to stop playback, rewind, and fast forward operations. The STOP button has no effect during record operation. Also use STOP button when setting the date/time.

25. Audio/Video Output Jack (Behind the cover)
Use the RF output adaptor (optional) to connect this jack to a TV to view the pictures played back by the camera/recorder.

26. REW/REVIEW Button
Press this button during stop or fast forward mode, and fast-rewinding starts. Press the button during playback of tape, and the tape is played back in the rewind direction approximately 5 times faster than the normal speed to confirm the recorded contents. Press PLAY button to return to normal playback mode or press STOP button to stop tape movement. Also use this button to review the last few seconds of the tape you are recording. Use REW/REVIEW button when setting the date/time.
NOTE: You can also visually scan backward when the camera/recorder is in record/pause (stand-by) mode by pressing and holding this button.

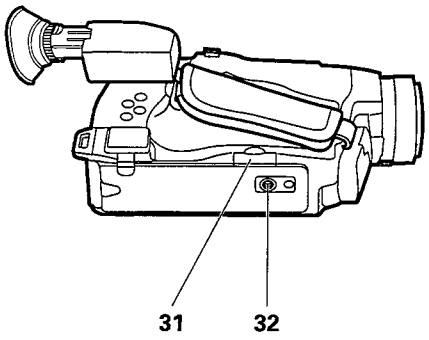
27. F.FWD Button
Press this button during stop or rewind mode, and fast-forwarding starts. Press the button during playback of tape, and the tape is played back in the forward direction approximately 7 times faster than the normal speed to confirm the recorded content. Press PLAY button to return to normal playback mode or press STOP button to stop tape movement. Also use F.FWD button when setting the date/time.
NOTE: You can also visually scan forward when the camera/recorder is in record/pause (stand-by) mode by pressing and holding this button.

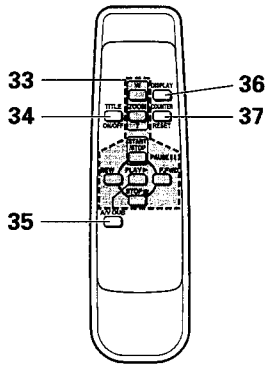
28. Start/Stop Button
This button is used to control the camera/recorder. When this button is pressed with the camera/recorder set to the record/pause mode, the tape runs to start recording.
When this button is pressed again, the tape stops and the camera/recorder enters the record/pause (stand-by) mode. This button may also be used to display a still picture during playback mode.

29. CAM/OFF/VIDEO Switch
This switch turns the camera/recorder on and off. Set the switch to CAM for camera recording, and to VIDEO for playback. Hold down the small red button as you slide the switch to CAM or VIDEO. You do not need to hold down the red button to slide the switch to OFF

30. Hand Strap
Adjust to best fit to your hand. (Refer to page 7.)

CONTROLS AND FUNCTIONS





31. Clock Battery Compartment
Pull the battery holder and install the lithium battery (provided).

32. Tripod Mount Screw
Use this screw to mount the camera/recorder on a tripod (generally available).

33. Camera/Recorder Control Buttons
These shaded buttons on the remote control function the same as those on the camera/recorder.

34. TITLE ON/OFF Button (only on the remote control)
Use this button to store a title in memory or recall the stored title and record it superimposed on the picture being shot.

35. A/V DUB Button (only on the remote control)
This button is used to record new audio and video in place of existing audio and video.

36. DISPLAY Button
Use this button to select the display in the viewfinder.

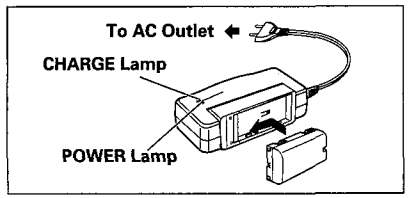
37. COUNTER RESET Button (only on the remote control)
Press this button to reset the linear time counter in the viewfinder to "0:00:00"

CHARGING THE BATTERY

The first step is to set the battery to charge. To charge the battery, use the provided AC adaptor/charger.
Charge the battery at a temperature range of 10°C — 30°C to prevent damage to the battery.

NOTE: This camera/recorder operates with the lithium ion battery such as VM-BPL13/VM-BPL27/VM-BPL30.

Charge the battery on a flat surface without vibration.



1. Plug the AC adaptor/charger power cord into an AC outlet. The POWER lamp (red) lights up.
2. Align the bottom of the battery with mark ▶ on the AC adaptor/charger, and then slide it in the direction of the arrow as shown in the figure.
   The CHARGE lamp (green) lights up.
3. The CHARGE lamp will repeatedly light for 3 seconds and then go off to show that the battery has been charged approximately 70% of full charge. When the CHARGE lamp goes out, the battery has been completely charged. After the lamp goes out, unplug the AC adaptor/charger from the AC outlet and remove the battery from the AC adaptor/charger.

NOTES:
- You can use the battery before it is completely charged.
- Remove the DC cord from the AC adaptor/charger before attempting to charge the battery.
- If you re-attach the fully charged battery to the AC adaptor/charger after the CHARGE lamp goes out, the lamp will light. This simply informs you that the battery has been completely charged; it does not indicate that the charge has been insufficient.

Charging time

Charging \ Battery pack	VM-BPL13	VM-BPL27	VM-BPL30
Full charge	130 min.	230 min.	260 min.
70% charge	70 min.	140 min.	160 min.

Operating time
The camcorder operating time depends on how often you turn power on/off and use start/stop and zoom.

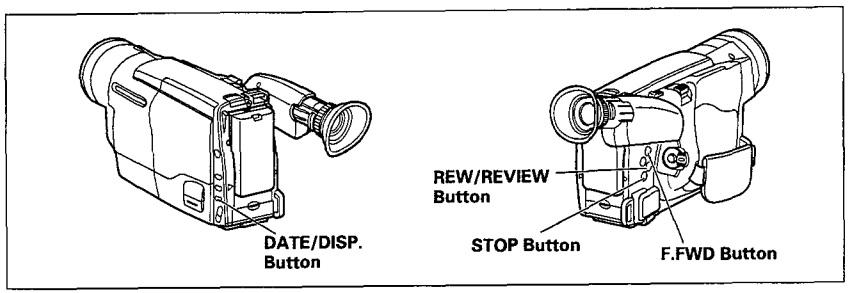
Recording \ Battery pack	VM-BPL13	VM-BPL27	VM-BPL30
Continuous recording	140 min.	300 min.	320 min.
Typical recording	80 min.	170 min.	180 min.

Notes on the battery
- It is recommended that the battery always be left in the discharged state when not in use, and charged before you use it.
- Avoid storing a fully charged battery, and do not store it in a place where the temperature is high: this will damage the battery.
- Do not operate the battery at temperature below –10°C or above 45°C. At extremely low temperatures operation time decreases, while at high temperature the battery may be damaged.
- If the POWER lamp begins to flash during charging, remove the battery and then reattach it to the AC adaptor/charger. If the POWER lamp continues to flash after several attempts to attach it, the battery is unable to take a charge and must be replaced.
- Do not attach a hot battery to the AC adaptor/charger. Allow it to cool.
- There are no user-serviceable parts inside the battery or AC adaptor/charger.
- Throwing the battery into fire or exposing it to excessive heat (above 60°C) may cause injury.
- Shorting the battery's terminal increases risk of fire or electrical shock.

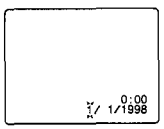
DATE/TIME SETTING

The date and time can be recorded on your tapes to act as a handy reference when viewing them at a later time. Use the following procedure to set up this display for the current date and time.
Make sure that the current time is displayed correctly before you start recording.

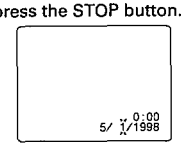
NOTE: Be sure to insert the clock battery before setting the date and time. Although the date and time can be set without the clock battery inserted, they will disappear when the battery providing power to the camera/recorder is removed.



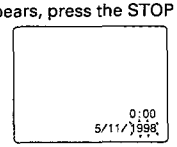
1. Slide the CAM/OFF/VIDEO switch to "CAM".
2. Press the DATE/DISP button.
   "0:00" and "1/1/1998" appears in the viewfinder and "1" flashes.



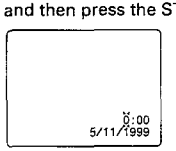
3. Press the F.FWD button to select correct date. Hold button down to advance rapidly. If you go past the date you want to set, press the REW/REVIEW button. When the correct date appears, press the STOP button.



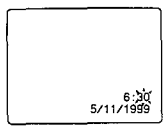
4. Press the F.FWD button to select correct month. Hold button down to advance rapidly. If you go past the month you want to set, press the REW/REVIEW button. When the correct month appears, press the STOP button.



5. Press the F.FWD or REW/REVIEW button to select year, and then press the STOP button.



6. Press the F.FWD or REW/REVIEW button to select correct hour, and then press the STOP button.
7. Press the F.FWD or REW/REVIEW button to select correct minute.



8. After setting to the correct minute, press the DATE/DISP button to change the display and start the internal clock.
   It is recommended that you press the DATE/DISP. button to match the time signal.

NOTE: After the date and time are set, "◷ AUTO" appears and the camera/recorder enters the automatic date recording mode. See "DATE RECORDING" on page 17.

■ To correct date/time after starting the date/time

1. Press and hold the DATE/DISP button, and then press STOP button. The date starts flashing.
2. Correct the incorrect digit by using the F.FWD, REW/REVIEW and STOP buttons.

■ To correct date/time during programming

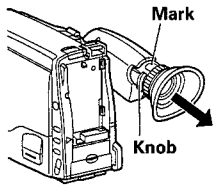
1. Press the STOP button repeatedly until the digit that is incorrect flashes.
2. Correct the incorrect digit by using the F.FWD, REW/REVIEW and STOP buttons.

TROUBLESHOOTING

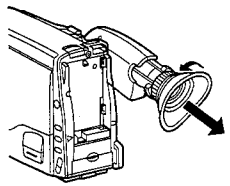
Symptom	Check Point & Correction
Cassette holder cannot be opened when you slide the EJECT switch.	Connect the power source.
Cassette cannot be inserted into cassette compartment.	Load cassette in direction indicated by arrow on cassette.
	The cassette window must be towards the outside.
Picture does not appear in the viewfinder.	Open the lens door.
	Slide the CAM/OFF/VIDEO switch to "CAM" position.
The camera/recorder cannot go into the recording mode, even when Start/Stop button is pressed.	Check the record-protect tab on the cassette. See page 13 for details.
	Set the CAM/OFF/VIDEO switch to "CAM" position.
	Push the cassette door embossed PUSH LOCK to close it.
	The " ▬ " indication in the viewfinder flashes to indicate battery is discharged. Try another battery or charge the battery.
PLAY button cannot be engaged.	Set the CAM/OFF/VIDEO switch to "VIDEO" position.
Interference on playback picture. (The TV is connected to the camera/recorder using the RF output adaptor.)	When you see the playback picture on your TV, adjust fine tuning knob on television set to obtain the best picture.
Picture is out of focus. Auto-focus does not operate correctly.	Press the FOCUS control buttons simultaneously to erase "FOCUS" in the viewfinder.
	Auto-focus does not operate correctly if a special-effects filter is attached or with the objects shown on page 18.
Power is interrupted.	If the record pause mode continues for more than 5 minutes, power is shut off automatically. Press the Start/Stop button to restore the power.
Power is turned on, but no button operations are accepted.	Remove the power source and the clock battery. And after about one minute, the display in the viewfinder will be reset. Then set the information again.
"TAPE" appears in the viewfinder.	Have you moved the camera/recorder or cassette from a cold place to a warm place so that its temperature changed abruptly? If the temperature has changed, remove the cassette and set the CAM/OFF/VIDEO switch to OFF, then wait for about one hour.
	Remove the cassette and then try to reinsert: remove it several times. If the indication is still shown in the viewfinder, use a cleaning tape to clean the heads and replace the cassette.

CLEANING THE INSIDE OF THE ELECTRONIC VIEWFINDER

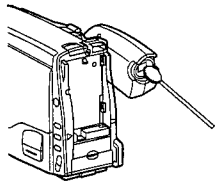
If dust or foreign matter adheres inside the viewfinder, clean it by using the following procedure.



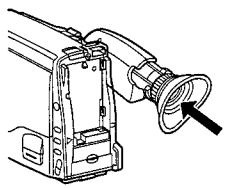
1. Grasp the knobs on both sides of the eye cup stem and pull out the eye cup far enough that a mark can be seen (up to half where the eye cup is pulled out all the way).



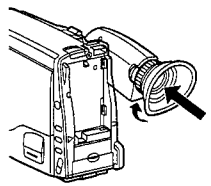
2. While still grasping the knobs, turn the eye cup counterclockwise until it stops; then pull out to remove it.



3. Clean the picture tube cover and lens. To prevent scratching, use a soft non-abrasive cloth, cotton swab or lens cleaning paper.



4. Grasp the knobs of the eye cup stem so the mark faces up as shown and push the eye cup in as far as it will go.



5. While grasping the knobs, turn the eye cup clockwise until it stops, then push it in all the way.

MAINTENANCE

1. To maintain the optimum performance of this camera/recorder, regular periodic maintenance is required. Your dealer will advise you further.
2. Maintenance and adjustments may not be carried out by the user. In all cases of difficulty or doubt, consult your dealer.
3. Head cleaning
   Dirt accumulated on the video heads after a period of time may cause the playback picture to become blurred or part of the video information to be lost. This does not mean that the recorded programme has been erased but head cleaning is required.
   Use a dry type head cleaning tape to clean the video heads.
   When it is difficult to remove a dirt using the head cleaning tape, head cleaning requiring highly technical care is necessary.
   Consult your nearest dealer or VCR service centre for head cleaning.

CHAPTER 2 DISASSEMBLY

The disassembly procedure is the same as for the VM-E330E and VM-E535LE. Refer to the VM-E330E/H630E/E535LE/E635LE/H835LE Service Manual (No. 6714E).

CHAPTER 3 ELECTRIC CIRCUIT ADJUSTMENT

This manual includes only the differences from the VM-E330E and VM-E535LE (VM-E635LE).
For items not included in this manual, refer to the VM-E330E/H630E/E535LE/E635LE/H835LE Service Manual (No. 6714E).

COMPARISON OF ADJUSTMENT

	ITEM	COMPARISON	NOTE
CAMERA SECTION	Initial Setting by Model	Same as VM-E330E/E535LE	
	ELECTRIC VOLUME ADJUSTMENT		
	CDS Sampling Pulse Adjustment	Same as VM-E330E/E535LE	
	DIGITAL ADJUSTMENT		
	Auto Iris Control Adjustment	Same as VM-E330E/E535LE	
	Matrix Adjustment	Same as VM-E330E/E535LE	Refer to Type 330, 535
	White Balance Adjustment	Same as VM-E330E/E535LE	
	Chroma Gain Adjustment	Same as VM-E330E/E535LE	
	AUTOFOCUS ADJUSTMENT		
	Zoom Trace Adjustment	Same as VM-E330E/E535LE	
	AF Noise Level Adjustment	Same as VM-E330E/E535LE	
	Stabilizer (EIS) Adjutment	Same as VM-E635LE	Refer to Type 635. For VM-E545 LE.
	Spot NoiseAdjustment	Same as VM-E330E/E535LE	
	ELECTRONIC VIEWFINDER (EVF) ADJUSTMENT		
	Deflection Yoke Position, EVF Centering Adjustment	Same as VM-E330E/E535LE	
	EVF Vertical Size Adjustment	Same as VM-E330E/E535LE	
	EVF Brightness Adjustment	Same as VM-E330E/E535LE	
	EVF Focus Adjustment	Same as VM-E330E/E535LE	
	COLOR LCD DISPLAY ADJUTMENT		
	LCD Flicker Adjustment	**Changed**	Change of the adjustment point. Refer to the next page. For VM-E543LE/E545LE/E548LE.
VCR SECTION	SYSTEM CONTROL/SERVO CIRCUITS ADJUSTMENT		
	Power Shut Off Level (ODC: Over Discharge) Adjustment	Same as VM-E530E/E535LE	
	Head Switching Point Adjustment	Same as VM-E530E/E535LE	
	LUMINANCE/CHORMA CIRCUIT ADJUSTMENT		
	Comb Filter Adjustment	Same as VM-E530E/E535LE	
	E-EVideo Siganl Level Adjustment	Same as VM-E530E/E535LE	
	White Cilp Adjustment	Same as VM-E530E/E535LE	
	Carrier Frequency Adjustment	Same as VM-E530E/E535LE	
	Deviation Adjustment	Same as VM-E530E/E535LE	
	Record Luminace Adjustment	**Changed**	Chenge of the adjustment value. Refer to page E3-3
	Playback Luminance Adjustment	Same as VM-E530E/E535LE	
	Color Alignment Adjutment	Same as VM-E530E/E535LE	

2.9 COLOR LCD DISPLAY ADJUSTMENT [For Type 543, 545, 548]

2.9.1 Adjustment Parts Location

Note: Picture appears on the LCD only when the LCD monitor is open. To displa y a picture while the case (LCD OPEN/ CLOSE switch) is off, short pins 1 and 2 of PG905 on the VCA board using a shorting clip, etc.

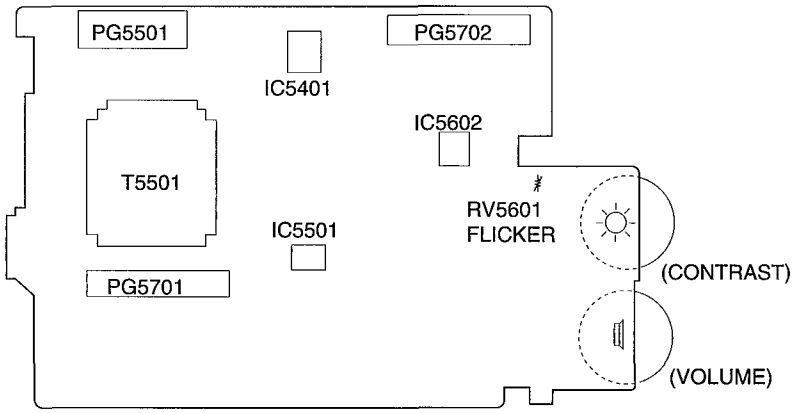


Fig. 2-101 LCD Circuit Board (Side-B)

2.9.2 Adjustment Procedure

(1) LCD Flicker Adjustment (Fig. 2-101)

Be sure to perform this adjustment after replacing the LCD board and LCD panel.

Purpose	· To minimize flickering in the LCD picture.		
Incompleted Phenomenon	· Color quality of the LCD picture declines. · Contrast of the LCD picture becomes duller.		
Equipment/Jigs	**Test Points**	**Condition**	**Adjustment point**
· Alignment Tape · LCD Display		· Playback the alignment tape (Color Bar) · Set the BRIGHT control to center click position.	RV5601 (FLICKER) LCD

Adjustment procedure

1) RV5601:
To optimize the tint of color bars. (When the variable resistor is moved one turn, there will be a range where the picture does not change. Perform adjustment outside this range.)

(6) Record Luminance Adjustment (Fig. 3-2)

Purpose	· To set the luminance signal to the specified value.		
Incompleted Phenomenon	· The luminance S/Ns diteriorate. · Cross-beats appear on the monitor screen.		
Equipment/Jigs	**Test Points**	**Condition**	**Adjustment point**
· Oscilloscope	· CH-1: Video Out (AV OUT) · CH-2: TP0101 VCA	· Input the white (100%) signal · STOP mode	*RT0103 VCA (REC LUMA LEVEL)
· Color Bar Generater	· Video IN (AV IN)		
· ATF-R Jig (SW3: ON)	· PG0601 VCA		
· Blank Tape (Nor-8, Hi-8)			

<PROCEDURE>

[For Normal 8 Model]

1) Load the blank tape for normal 8.

[For Hi-8 Model]

1) Load the blank tape for Hi-8.

2) Connect the ATF-R jig to PG0601 and turn the power off.
3) Set the camera/recorder to the test mode by the following procedure.

- Procedure to set to the test mode -

1. Remove the power supply from the camera/ recorder.
2. Set the CAMERA/OFF/VCR switch to CAMERA position.
3. Check that the ATF-R jig (SW1:OFF, SW3:ON) is connected and then press the playback button and hold it , then supply the power again to the camera/recorder.

4) Set the unit to the loading state.

[For Normal 8 Model]

5) RT0103:
Set the sync tip section in record luminance signal is 550mV ± 5mVp-p.

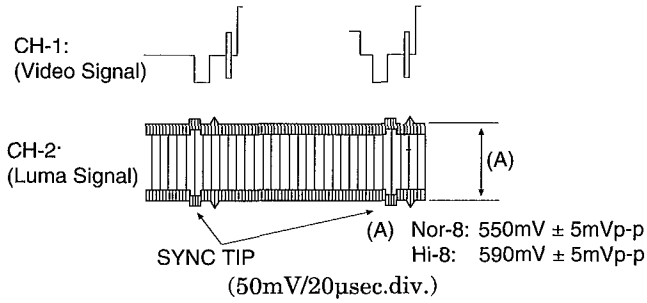
[For Hi- 8 Model]

5) RT0103:
Set the sync tip section in record luminance signal is 590mV ± 5mVp-p.

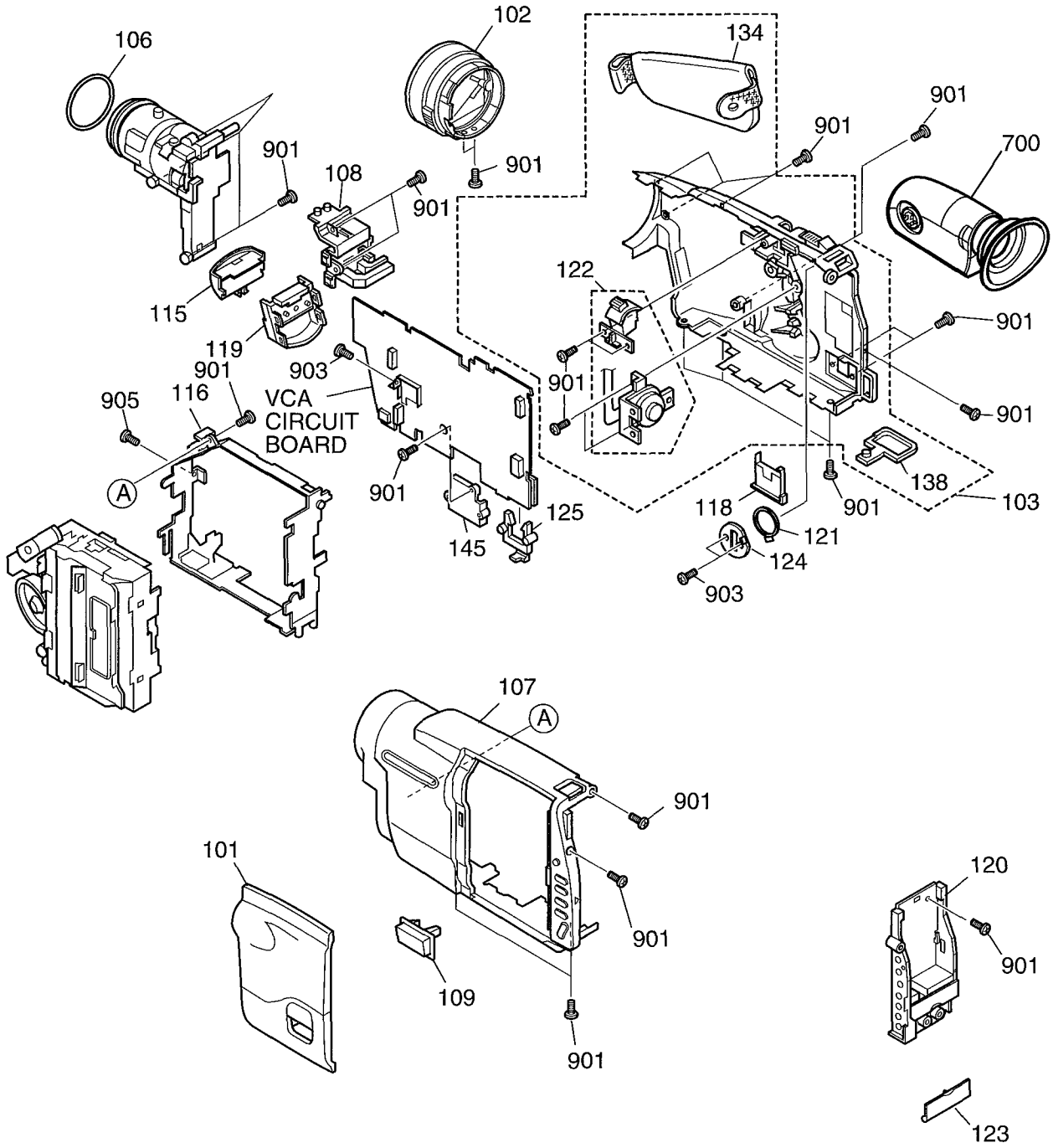
- Settings of oscilloscope -

· Trigger with video signal.

- Waveforms -

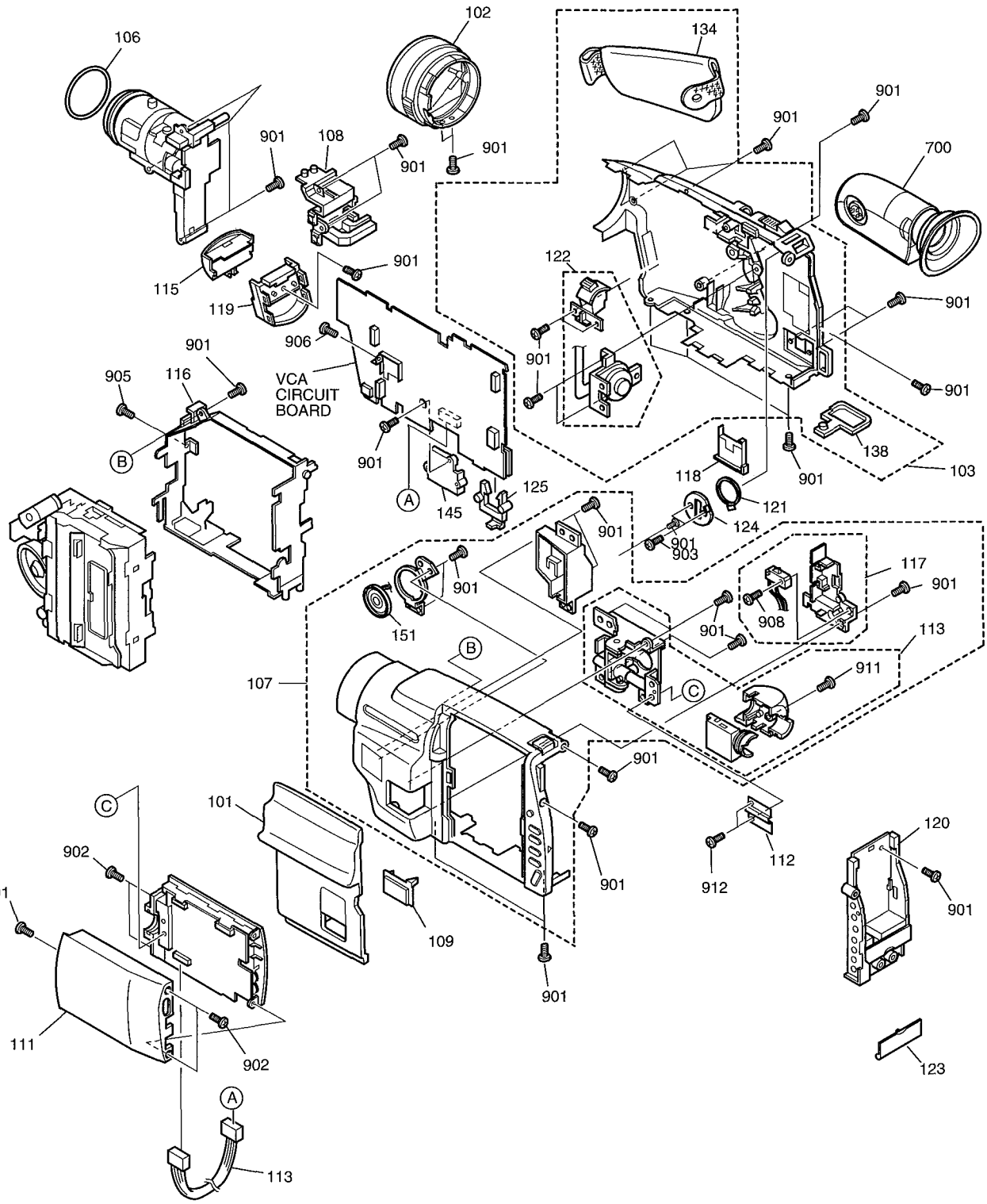


1. CABINET SECTION [TYPE 330, 340]



NOTE: The synthetic resin members that can be dismantled are shown by abbreviations using letters.

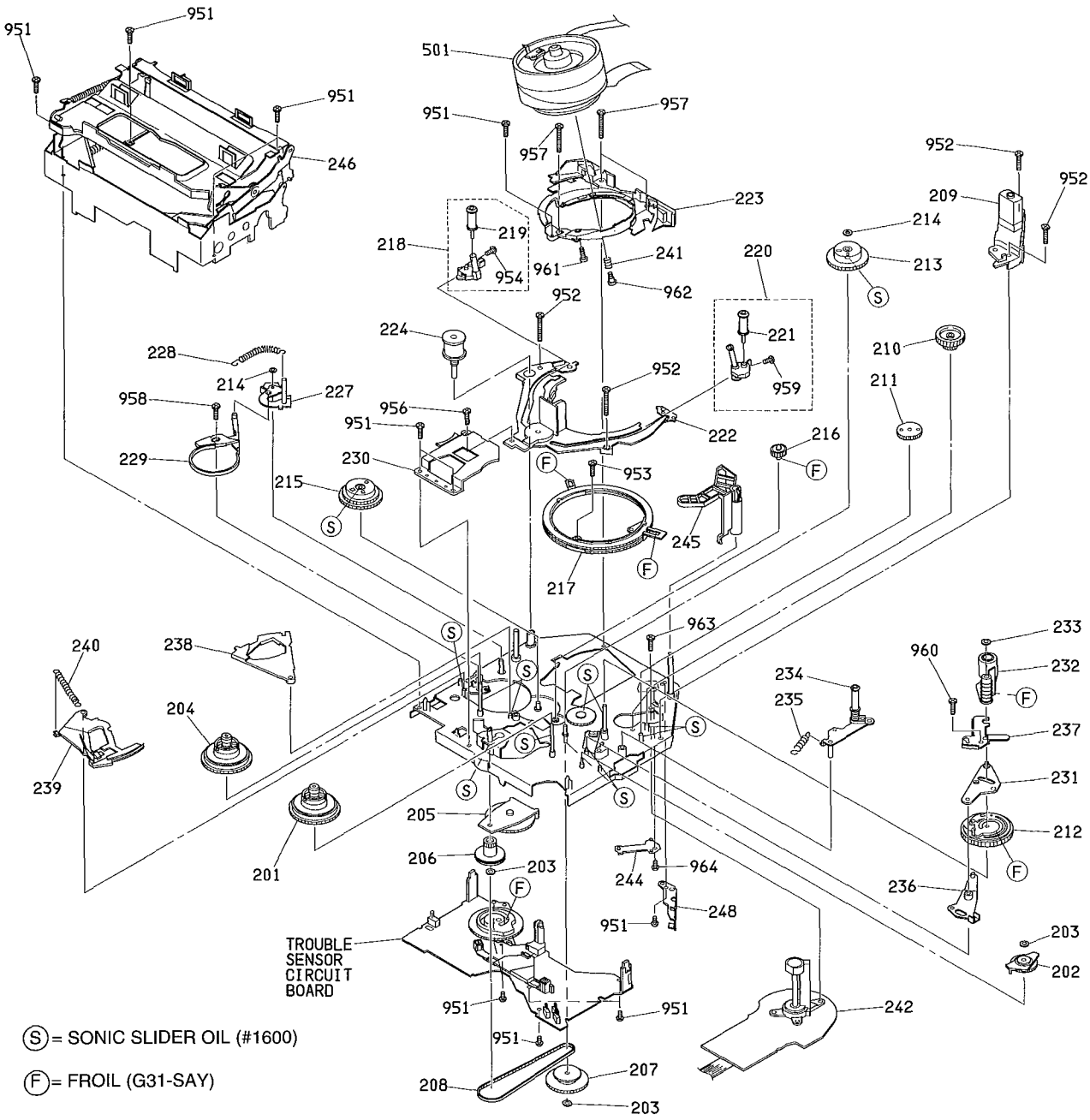
2. CABINET SECTION [TYPE 543, 545, 548]

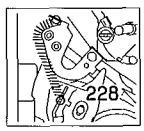


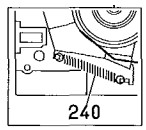
NOTE: The synthetic resin members that can be dismantled are shown by abbreviations using letters.

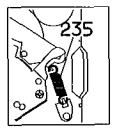
3. CHASSIS SECTION

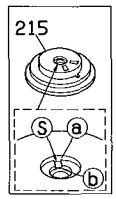
NOTE: If you change the Loading Relay Gears, please use oiler to apply Sonic Slidas oil between (a) to (b). If oil is not applied, Loading Relay Gears will be locked.

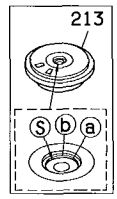




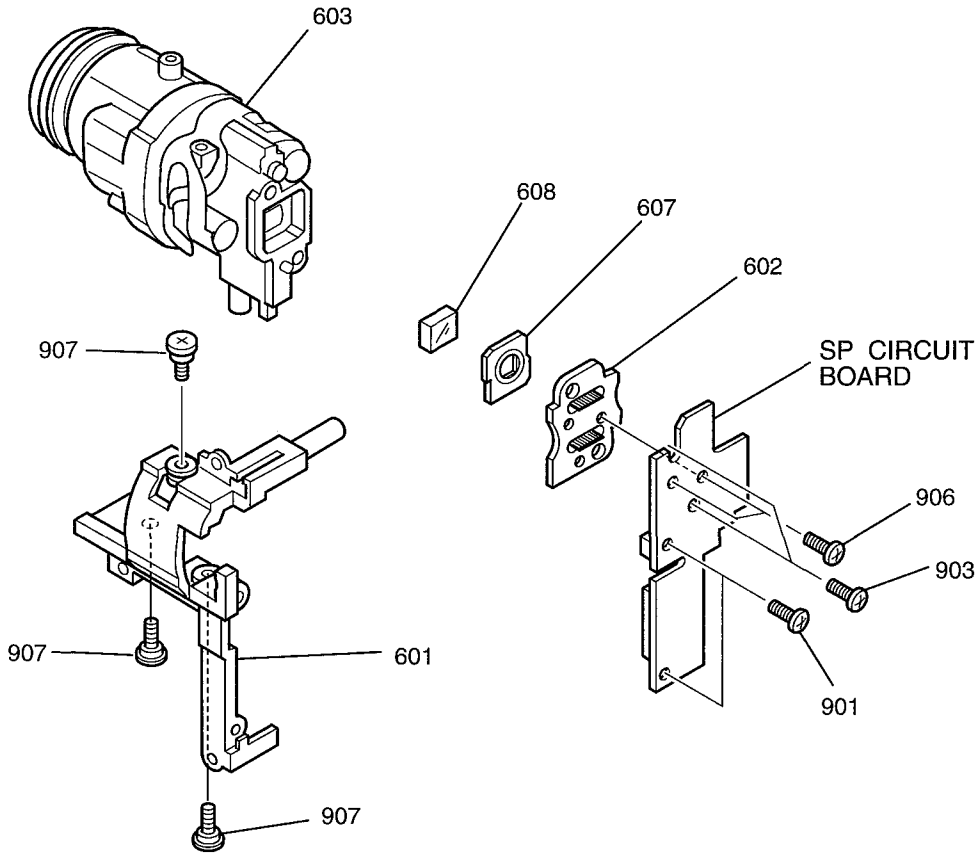




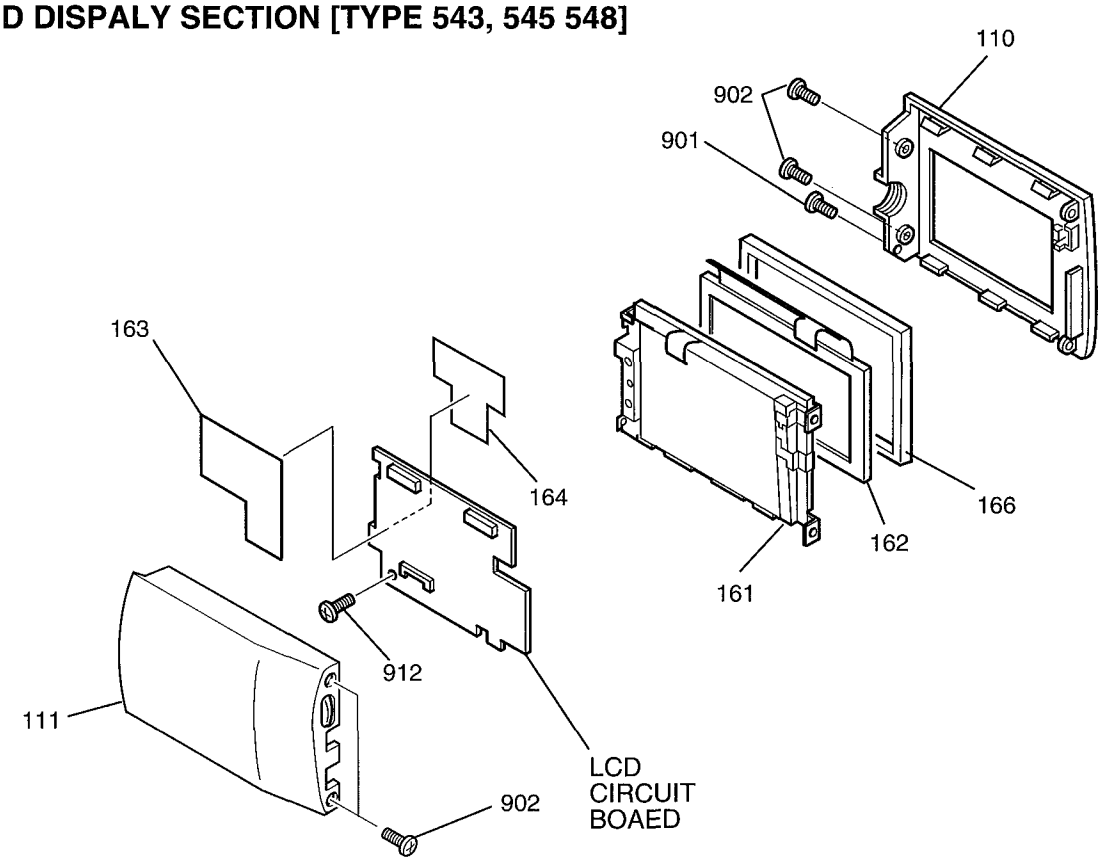




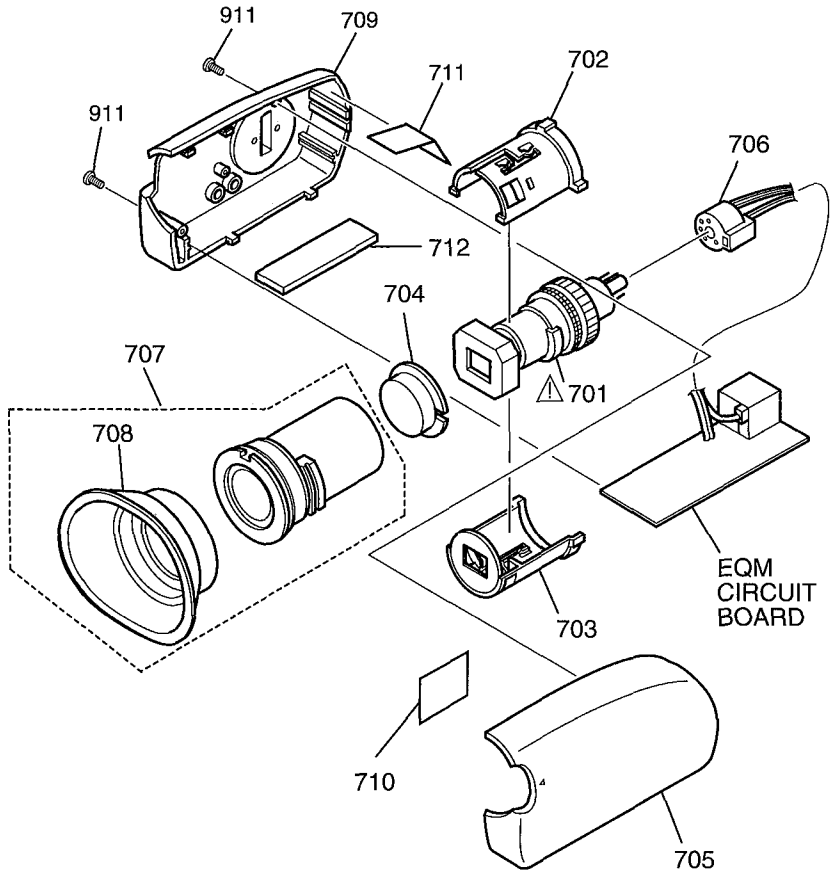
4. CAMRA BLOCK SECTION



5. LCD DISPALY SECTION [TYPE 543, 545 548]

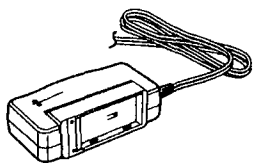
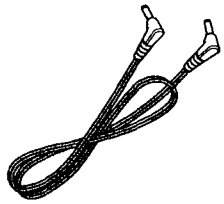
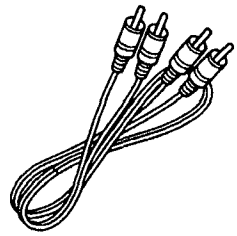
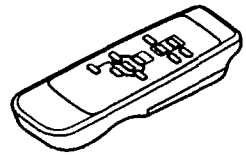
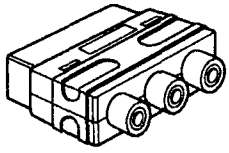
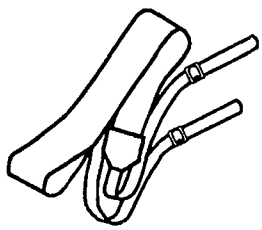
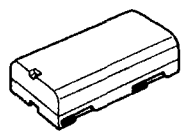


6. ELECTRONIC VIEW FINDER (EVF) SECTION



7. ACCESSORIES

Note: The provided accessories are different for each model and each destination.
See the Replacement Parts List and Instruction Manual for details.

⚠ 802 VM-ACE4E 	803 	804 	805 
806 	807 	⚠ BATTERY PACK 	

CHAPTER 5 REPLACEMENT PARTS LIST

1. MECHANICAL PARTS LIST

SYMBOL NO	P-NO	DESCRIPTION
		MECHANISM SECTION
101	QD15204	LID,CASSETTE[TYPE 543/545/548]
101	QD15186	LID,CASSETTE[TYPE 330/340]
102	QD15081	RING,LENS
103	FH10353	CASE,SIDE(R)
106	NX11243	RING,O
107	QD15005	CASE,SIDE(L)[TYPE 330/340]
107		CASE,SIDE(L)[TYPE 543]
107	QD16203	CASE,SIDE(L)[TYPE 545]
107	QD16202	CASE,SIDE(L)[TYPE 548]
108	NJ11331	HOLDER,IR
109	PC13241	BUTTON,LID[TYPE 330/340]
109	PC13251	BUTTON,LID[TYPE 543/545/548]
110	QD16181	CASE,LCD(B)[TYPE 543/545/548]
111		CASE,LCD(U)[TYPE 543]
111	QD15735	CASE,LCD(U)[TYPE 548]
111	QD15736	CASE,LCD(U)[TYPE 545]
112	MN12761	SPACER[TYPE 543/545/548]
113	NX15048	SUPPORTING ASSY[TYPE 543/545/548]
115	GH10291	MICROPHONE,MONORAL
116	NT10951	FRAME,MECHA
117	NJ11311	HOLDER,WIRE[TYPE 543/545/548]
118	QD15282	CASE,BATTERY
119	QD15072	FILTER,IR
120	FH10335	SWITCH,REAR UNIT
121	4899872	SPRING
122	FH10371	SWITCH,T/W
123	QX12792	COVER,JACK
124	NA15041	STOPPER
125	NJ11301	HOLDER
134	PV10241	STRAP,HAND
138	QX12801	COVER
145	NX15461	HOLDER,BATTERY
151	GK10251	SPEAKER[TYPE 543/545/548]
161	DT10192	LIGHT,BACK[TYPE 543/545/548]
162	DB10531	DISPLAY,LIQUID CRYSTAL[TYPE 543/545/548]
165	MN13291	SHEET,SHIELD VOL[TYPE 543/545/548]
166	NJ11751	HOLDER,LCD[TYPE 543/545/548]
201	6404062	REEL DISK,TAKE-UP
202	6406114	GEAR
203	7787733	WASHER
204	6404073	REEL DISK,SUPPLY
205	6401644	GEAR,IDLER
206	6406211	GEAR
207	KF11411	GEAR,PULLY
208	6358471	BELT
209	KX18142	BLOCK,LOADING
210	6376312	GEAR,DRIVE
211	6406082	GEAR
212	6406242	GEAR
213	6405834	GEAR (R)
214	7787731	WASHER
215	6405824	GEAR (L)
216	6406131	GEAR
217	4588464	RING,LOADING
218	4589354	BAS,GUIDE ROLLER(I)
219	KX10172	ROLLER,GUIDE
220	4589366	BASE,GUIDE ROLLER(O)
221	4588909	ROLLER,GUIDE
222	4587796	PLATE
223	KX15651	BASE,CYLINDER
224	6406158	ROLLER,IMPEDANCE
227	4589016	ARM,TENSION
228	6554231	SPRING
229	4588553	BAND,TENSION
230	6408832	COVER,IDLER
231	NA10601	PLATE
232	4588294	ARM,PRESSURE ROLLER
233	7787571	WASHER
234	4588702	ARM
235	6554201	SPRING
236	KX10731	LEVER
237	4588532	SPRING
238	4588429	PLATE
239	4588353	BRAKE
240	6554221	SPRING
241	6554214	SPRING
242	GP10511	MOTOR,CAPSTAN
244	5794021	BRUSH
245	4588995	COVER
246	KX10761	CASSETTE HOLDER ASSY
248	4827262	BRACKET
501	HX10252	CYLINDER,ASSY (CY-53LN)
601	NT10961	FRAME,LENS
602	UE13384	CCD IMAGE SENSOR ASSY
603	KQ10521	LENS,ZOOM
607	NX11252	RUBBER
608	DT10141	CRYSTAL
700	UX10571	EVF ASSY
⚠701	5319063	CRT
702	4715252	CASE,CRT
703	4715241	CASE,CRT(B)
704	4592241	COVER
705	QD15401	CASE,EVF (R)
706	EF10248	CONNECTOR
707	QD15414	CASE,SLIDE
708	QX11991	CAP,EYE
709	QD15391	CASE,EVF (L)
710	4345001	SPACER
711	4344291	SPACER
712	MN10461	SHEET
901	7775946	SCREW (2X6)
902	7775964	SCREW(2X4)[TYPE 543/545/548]
903	7775945	SCREW(2X5)
905	7773891	SCREW
906	8650103	SCREW(2X3)
907	MJ10221	SCREW
911	8619003	SCREW 1.7X5
912	8650104	SCREW[TYPE 543/545/548]
951	8712024	PAN HEAD SCREW-1.4MMDX3MM
952	8700272	SCREW(1.7X5)
953	7775921	SCREW(1.4X2)
954	8714004	SCREW(1.4X2.5)
956	8619065	SCREW(1.7X6)
957	8700976	SCREW(1.7X8.0)
958	7770791	SCREW
959	8712904	SCREW(1.4X2.0)
960	8619063	SCREW(1.7X3)
961	8711105	SCREW(2X5)
962	7785886	SCREW
963	8700264	1.7X2 SCREW
964	8741103	SCREW(2X3)
		ACCESSARIES
⚠802	TS14504	AC ADAPTOR (VM-ACE4E)[FOR UK]
⚠802	TS14505	AC ADAPTOR (VM-ACE4E)[FOR AU]
⚠802	TS14503	AC ADAPTOR (VM-ACE4E)[EXCEPT FOR UK,AU]

SYMBOL NO	P-NO	DESCRIPTION
803	EV10511	CORD,PLUG
804	EW10943	CORD
805	HL11041	REMOTE HAND SET(VM-RME411A)
806	TS12981	AV PLUG ADAPTER [Except for AU,SW]
807	TS14621	STRAP,SHOULDER

SYMBOL NO	P-NO	DESCRIPTION

2. ELECTRICAL PARTS LIST

SYMBOL NO	P-NO	DESCRIPTION
		CAMERA & VCR SECTION
C0101	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C0102	0806174	ELECTROLYTIC 100UF 6.3V
C0103	0893197	CERAMIC CHIP 0.022UF+-10% 25V
C0104	0893188	CERAMIC CHIP 0.047UF+-10% 16V
C0105	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0106	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0108	0893188	CERAMIC CHIP 0.047UF+-10% 16V
C0109	0893197	CERAMIC CHIP 0.022UF+-10% 25V
C0110	0893197	CERAMIC CHIP 0.022UF+-10% 25V
C0111	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0112	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C0113	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0114	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0115	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0116	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0117	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0118	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C0119	0893119	CERAMIC CHIP 33PF+-5% 50V
C0120	0893122	CERAMIC CHIP 47PF+-5% 50V
C0121	0893121	CERAMIC CHIP 39PF+-5% 50V
C0122	0806174	ELECTROLYTIC 100UF 6.3V
C0130	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0131	0806168	ELECTROLYTIC 47UF 6.3V
C0132	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0134	0893119	CERAMIC CHIP 33PF+-5% 50V
C0136	0893115	CERAMIC CHIP 15PF+-5% 50V
C0137	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0140	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0141	0893133	CERAMIC CHIP 330PF+-5% 50V
C0142	0893123	CERAMIC CHIP 56PF+-5% 50V
C0143	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0144	0893214	CERAMIC CHIP 2700PF+-10% 50V
C0145	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0146	0893115	CERAMIC CHIP 15PF+-5% 50V
C0148	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0149	0893117	CERAMIC CHIP 22PF+-5% 50V
C0150	0893114	CERAMIC CHIP 12PF+-5% 50V
C0151	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0153	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0154	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0155	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0156	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0159	0893109	CERAMIC CHIP 7.0PF 50V
C0164	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0165	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0174	0806133	ELECTROLYTIC 10UF 6V
C0175	0893106	CERAMIC CHIP 4.0PF+-0.25% 50V
C0176	0893127	CERAMIC CHIP 120PF+-5% 50V
C0178	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0179	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0180	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C0181	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0182	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0183	0806153	ELECTROLYTIC 10UF 16V
C0184	0893067	CERAMIC CHIP 0.1UF+80-20% 25V
C0185	0806024	ELECTROLYTIC 3.3UF 6.3V
C0188	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0189	0893125	CERAMIC CHIP 82PF+-5% 50V
C0190	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0191	0893125	CERAMIC CHIP 82PF+-5% 50V
C0192	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C0193	0893125	CERAMIC CHIP 82PF+-5% 50V
C0194	0893106	CERAMIC CHIP 4.0PF+-0.25% 50V
C0195	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C0205	0893197	CERAMIC CHIP 0.022UF+-10% 25V
C0206	0893197	CERAMIC CHIP 0.022UF+-10% 25V
C0207	0893114	CERAMIC CHIP 12PF+-5% 50V
C0208	0893127	CERAMIC CHIP 120PF+-5% 50V
C0213	0893102	CERAMIC CHIP 1.0PF+-0.25% 50V
C0214	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0215	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0216	0806174	ELECTROLYTIC 100UF 6.3V
C0217	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0218	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C0219	0806024	ELECTROLYTIC 3.3UF 6.3V
C0221	0893217	CERAMIC CHIP 4700PF+-10% 50V
C0222	0893188	CERAMIC CHIP 0.047UF+-10% 16V
C0223	0893188	CERAMIC CHIP 0.047UF+-10% 16V
C0224	0893124	CHIP CERAMIC 68PF+-5% 50V
C0225	AA00352R	CERAMIC CHIP 0.33UF+-10% 16V
C0227	0893197	CERAMIC CHIP 0.022UF+-10% 25V
C0228	0893059	CERAMIC CHIP 0.47UF+80-20% 16V
C0229	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0231	0806168	ELECTROLYTIC 47UF 6.3V
C0232	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0235	0893123	CERAMIC CHIP 56PF+-5% 50V
C0237	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0238	0893197	CERAMIC CHIP 0.022UF+-10% 25V
C0240	0893115	CERAMIC CHIP 15PF+-5% 50V
C0242	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0243	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0244	0806027	ELECTROLYTIC 4.7UF 4V
C0245	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0246	0806133	ELECTROLYTIC 10UF 6V
C0247	0806027	ELECTROLYTIC 4.7UF 4V
C0249	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0250	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C0251	0806027	ELECTROLYTIC 4.7UF 4V
C0252	0806027	ELECTROLYTIC 4.7UF 4V
C0253	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0254	0806133	ELECTROLYTIC 10UF 6V
C0255	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C0256	0893126	CERAMIC CHIP 100PF+-5% 50V
C0257	0806174	ELECTROLYTIC 100UF 6.3V
C0258	0893059	CERAMIC CHIP 0.47UF+80-20% 16V
C0259	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C0260	0893197	CERAMIC CHIP 0.022UF+-10% 25V
C0261	0893117	CERAMIC CHIP 22PF+-5% 50V
C0263	0893011	CERAMIC CHIP 0.15UF+-10% 16V
C0264	0893116	CERAMIC CHIP 18PF+-5% 50V
C0265	0893134	CERAMIC CHIP 390PF+-5% 50V
C0270	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0271	0806133	ELECTROLYTIC 10UF 6V
C0301	0893126	CERAMIC CHIP 100PF+-5% 50V
C0302	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0303	0806133	ELECTROLYTIC 10UF 6V
C0304	0893126	CERAMIC CHIP 100PF+-5% 50V
C0305	0893134	CERAMIC CHIP 390PF+-5% 50V
C0306	0806113	ELECTROLYTIC 1UF 25V
C0307	0806113	ELECTROLYTIC 1UF 25V
C0308	0893113	CERAMIC CHIP 10PF+-0.5% 50V
C0310	0893122	CERAMIC CHIP 47PF+-5% 50V
C0312	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0313	0806153	ELECTROLYTIC 10UF 16V
C0314	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0315	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0316	0806153	ELECTROLYTIC 10UF 16V

SYMBOL NO	P-NO	DESCRIPTION
C0352	0806178	ELECTROLYTIC 220UF 4V
C0353	0806133	ELECTROLYTIC 10UF 6V
C0354	0893179	CERAMIC CHIP 0.1UF+-10% 16V
C0356	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0357	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0358	0806168	ELECTROLYTIC 47UF 6.3V
C0359	0806027	ELECTROLYTIC 4.7UF 4V
C0360	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0362	0893124	CHIP CERAMIC 68PF+-5% 50V
C0363	0893126	CERAMIC CHIP 100PF+-5% 50V
C0364	0806153	ELECTROLYTIC 10UF 16V
C0365	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0367	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0368	0893131	CERAMIC CHIP 220PF+-5% 50V
C0369	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C0391	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0392	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0395	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C0401M	0806168	ELECTROLYTIC 47UF 6.3V
C0402M	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0403M	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0404M	0893188	CERAMIC CHIP 0.047UF+-10% 16V
C0406M	AD10266R	ELECTROLYTIC 22UF 4V
C0407M	0806163	ELECTROLYTIC 33UF 10V
C0408M	0806027	ELECTROLYTIC 4.7UF 4V
C0409M	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0410M	0806027	ELECTROLYTIC 4.7UF 4V
C0411M	AA00693R	CHIP CERAMIC 0.47UF+-10% 16V
C0412M	0806133	ELECTROLYTIC 10UF 6V
C0413M	0806027	ELECTROLYTIC 4.7UF 4V
C0414M	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0415M	0893191	CERAMIC CHIP 6800PF+-10% 25V
C0416M	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0418M	0893215	CERAMIC CHIP 3300PF+-10% 50V
C0419M	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0420M	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0421M	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0422M	0893213	CERAMIC CHIP 2200PF+-10% 50V
C0423M	AA00358R	CHIP CERAMIC 1.0UF+-10% 16V
C0426M	0806174	ELECTROLYTIC 100UF 6.3V
C0427M	0806174	ELECTROLYTIC 100UF 6.3V
C0428M	0806168	ELECTROLYTIC 47UF 6.3V
C0429M	0806133	ELECTROLYTIC 10UF 6V
C0430M	AA00358R	CHIP CERAMIC 1.0UF+-10% 16V
C0431M	AA00358R	CHIP CERAMIC 1.0UF+-10% 16V
C0432M	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0433M	0806168	ELECTROLYTIC 47UF 6.3V
C0434M	0806027	ELECTROLYTIC 4.7UF 4V
C0435M	0806156	ELECTROLYTIC 22UF 4V
C0436M	0202327	CERAMIC CHIP 0.22UF+-10% 16V
C0437M	0893095	CERAMIC CHIP 0.33UF+-10% 16V
C0438M	0893188	CERAMIC CHIP 0.047UF+-10% 16V
C0439M	0893188	CERAMIC CHIP 0.047UF+-10% 16V
C0440M	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0442M	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0444M	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0446M	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0447M	0806027	ELECTROLYTIC 4.7UF 4V
C0448M	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0501	0893217	CERAMIC CHIP 4700PF+-10% 50V
C0502	0893119	CERAMIC CHIP 33PF+-5% 50V
C0503	0893217	CERAMIC CHIP 4700PF+-10% 50V
C0504	0893119	CERAMIC CHIP 33PF+-5% 50V
C0505	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0507	0893014	CERAMIC CHIP 0.01UF+-10% 25V

SYMBOL NO	P-NO	DESCRIPTION
C0508	0893039	CERAMIC CHIP 4700PF+-10% 50V
C0509	0893126	CERAMIC CHIP 100PF+-5% 50V
C0510	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0511	0893089	CERAMIC CHIP 0.018UF+-10% 16V
C0513	0893227	CERAMIC CHIP 0.22UF+80-20% 16V
C0514	0893039	CERAMIC CHIP 4700PF+-10% 50V
C0516	0893039	CERAMIC CHIP 4700PF+-10% 50V
C0517	0893039	CERAMIC CHIP 4700PF+-10% 50V
C0518	0893129	CERAMIC CHIP 180PF+-5% 50V
C0519	0893133	CERAMIC CHIP 330PF+-5% 50V
C0520	0893129	CERAMIC CHIP 180PF+-5% 50V
C0521	0893133	CERAMIC CHIP 330PF+-5% 50V
C0522	0893129	CERAMIC CHIP 180PF+-5% 50V
C0523	0893215	CERAMIC CHIP 3300PF+-10% 50V
C0524	0893133	CERAMIC CHIP 330PF+-5% 50V
C0525	0893129	CERAMIC CHIP 180PF+-5% 50V
C0527	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0528	AA00802R	CERAMIC CHIP 10UF+80-20% 16V
C0529	AA00802R	CERAMIC CHIP 10UF+80-20% 16V
C0535	AA00802R	CERAMIC CHIP 10UF+80-20% 16V
C0538	0806157	ELECTROLYTIC 22UF 6.3V
C0539	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C0540	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C0541	AA00335R	CHIP CERAMIC 1.0UF+80-20% 25V
C0542	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C0543	AA00335R	CHIP CERAMIC 1.0UF+80-20% 25V
C0544	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C0545	AA00802R	CERAMIC CHIP 10UF+80-20% 16V
C0546	AA00802R	CERAMIC CHIP 10UF+80-20% 16V
C0547	0806174	ELECTROLYTIC 100UF 6.3V
C0548	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C0550	AA00802R	CERAMIC CHIP 10UF+80-20% 16V
C0551	AA00802R	CERAMIC CHIP 10UF+80-20% 16V
C0552	AA00802R	CERAMIC CHIP 10UF+80-20% 16V
C0555	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0556	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0559	AA00802R	CERAMIC CHIP 10UF+80-20% 16V
C0560	AA00802R	CERAMIC CHIP 10UF+80-20% 16V
C0601	0893205	CERAMIC CHIP 560PF+-10% 50V
C0602	0806027	ELECTROLYTIC 4.7UF 4V
C0603	0893115	CERAMIC CHIP 15PF+-5% 50V
C0604	0893215	CERAMIC CHIP 3300PF+-10% 50V
C0605	0893208	CERAMIC CHIP 1000PF+-10% 50V
C0606	0893204	CERAMIC CHIP 470PF+-10% 50V
C0607	0893179	CERAMIC CHIP 0.1UF+-10% 16V
C0608	0893206	CERAMIC CHIP 680PF+-10% 50V
C0609	0893197	CERAMIC CHIP 0.022UF+-10% 25V
C0610	0806156	ELECTROLYTIC 22UF 4V
C0611	0893179	CERAMIC CHIP 0.1UF+-10% 16V
C0612	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0613	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0614	0893179	CERAMIC CHIP 0.1UF+-10% 16V
C0615	0893205	CERAMIC CHIP 560PF+-10% 50V
C0616	0893115	CERAMIC CHIP 15PF+-5% 50V
C0617	0893215	CERAMIC CHIP 3300PF+-10% 50V
C0618	0893207	CERAMIC CHIP 820PF+-10% 50V
C0619	0893177	CAPACITOR 0.068UF+-10% 16V
C0622	0893123	CERAMIC CHIP 56PF+-5% 50V
C0635	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0636	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0637	0893195	CERAMIC CHIP 0.015UF+-10% 25V
C0638	0893195	CERAMIC CHIP 0.015UF+-10% 25V
C0641	0893226	CERAMIC CHIP 0.15UF+80-20% 16V
C0642	0806153	ELECTROLYTIC 10UF 16V
C0643	0806153	ELECTROLYTIC 10UF 16V

SYMBOL NO	P-NO	DESCRIPTION
C0645	0893217	CERAMIC CHIP 4700PF+-10% 50V
C0647	0893011	CERAMIC CHIP 0.15UF+-10% 16V
C0648	0893179	CERAMIC CHIP 0.1UF+-10% 16V
C0649	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0650	0893217	CERAMIC CHIP 4700PF+-10% 50V
C0651	0893217	CERAMIC CHIP 4700PF+-10% 50V
C0652	0893217	CERAMIC CHIP 4700PF+-10% 50V
C0671	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C0672	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C0673	0893213	CERAMIC CHIP 2200PF+-10% 50V
C0691	0893198	CERAMIC CHIP 0.027UF+-10% 25V
C0692	0893195	CERAMIC CHIP 0.015UF+-10% 25V
C0693	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0694	0893197	CERAMIC CHIP 0.022UF+-10% 25V
C0695	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0696	0893191	CERAMIC CHIP 6800PF+-10% 25V
C0902	0806169	ELECTROLYTIC 47UF 16V
C0904	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C0905	0806174	ELECTROLYTIC 100UF 6.3V
C0906	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0907	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0908	0806168	ELECTROLYTIC 47UF 6.3V
C0909	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C0910	0893188	CERAMIC CHIP 0.047UF+-10% 16V
C0911	0893107	CERAMIC CHIP 5PF+-0.25% 50V
C0912	0893107	CERAMIC CHIP 5PF+-0.25% 50V
C0913	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0914	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0915	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0916	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0917	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0918	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0919	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0923	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C0924	0893119	CERAMIC CHIP 33PF+-5% 50V
C0925	0893125	CERAMIC CHIP 82PF+-5% 50V
C0928	0893117	CERAMIC CHIP 22PF+-5% 50V
C0929	0893117	CERAMIC CHIP 22PF+-5% 50V
C0930	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C0932	0806174	ELECTROLYTIC 100UF 6.3V
C0939	0806168	ELECTROLYTIC 47UF 6.3V
C0942	0806174	ELECTROLYTIC 100UF 6.3V
C0943	0806174	ELECTROLYTIC 100UF 6.3V
C0944	0806174	ELECTROLYTIC 100UF 6.3V
C0999	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1002	0806169	ELECTROLYTIC 47UF 16V
C1003	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C1004	0893211	CERAMIC CHIP 1500PF+-10% 50V
C1005	0806169	ELECTROLYTIC 47UF 16V
C1006	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1007	0893113	CERAMIC CHIP 10PF+-0.5% 50V
C1008	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1009	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C1010	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1101	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C1102	0806178	ELECTROLYTIC 220UF 4V
C1103	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1104	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1105	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1106	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1107	0893067	CERAMIC CHIP 0.1UF+80-20% 25V
C1108	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1109	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1112	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C1113	0893193	CERAMIC CHIP 0.01UF+-10% 25V

SYMBOL NO	P-NO	DESCRIPTION
C1114	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C1115	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1116	0893117	CERAMIC CHIP 22PF+-5% 50V
C1117	0893119	CERAMIC CHIP 33PF+-5% 50V
C1118	0893119	CERAMIC CHIP 33PF+-5% 50V
C1119	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1120	0893124	CHIP CERAMIC 68PF+-5% 50V
C1121	0893126	CERAMIC CHIP 100PF+-5% 50V
C1122	0202319	CERAMIC CHIP 22PF+-2% 50V
C1123	0806173	ELECTROLYTIC 100UF 4V
C1125	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1126	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1127	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1128	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1129	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1130	0893067	CERAMIC CHIP 0.1UF+80-20% 25V
C1131	0893114	CERAMIC CHIP 12PF+-5% 50V
C1132	0806168	ELECTROLYTIC 47UF 6.3V
C1135	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C1136	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C1139	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1141	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1142	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C1143	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1144	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1145	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1146	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1147	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1148	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1149	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1150	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C1151	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C1155	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C1156	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1159	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1160	0893208	CERAMIC CHIP 1000PF+-10% 50V
C1161	0806168	ELECTROLYTIC 47UF 6.3V
C1163	0893119	CERAMIC CHIP 33PF+-5% 50V
C1166	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1167	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1169	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C1172	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1201	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1202	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1203	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1204	0893132	CERAMIC CHIP 270PF+-5% 50V
C1205	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1206	0893007	CERAMIC CHIP 0.082UF+-10% 16V
C1207	0202327	CERAMIC CHIP 0.22UF+-10% 16V
C1208	0893113	CERAMIC CHIP 10PF+-0.5% 50V
C1209	0893133	CERAMIC CHIP 330PF+-5% 50V
C1210	0893133	CERAMIC CHIP 330PF+-5% 50V
C1211	0893133	CERAMIC CHIP 330PF+-5% 50V
C1212	0893067	CERAMIC CHIP 0.1UF+80-20% 25V
C1213	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1301	0806186	ELECTROLYTIC 220UF 6.3V
C1302	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1303	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1304	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1305	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1311	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1314	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1403	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1404	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1405	0806157	ELECTROLYTIC 22UF 6.3V

SYMBOL NO	P-NO	DESCRIPTION
C1406	0806157	ELECTROLYTIC 22UF 6.3V
C1407	0893244	CERAMIC CHIP 0.012UF+-10% 50V
C1408	0893244	CERAMIC CHIP 0.012UF+-10% 50V
C1409	0893244	CERAMIC CHIP 0.012UF+-10% 50V
C1410	0893244	CERAMIC CHIP 0.012UF+-10% 50V
C1411	0206647	ELECTROLYTIC 10UF 10V
C1412	0206647	ELECTROLYTIC 10UF 10V
C1413	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1414	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C1415	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C1417	0806157	ELECTROLYTIC 22UF 6.3V
C1418	0893225	CERAMIC CHIP 0.1UF+80-20% 16V
C5301	0806133	ELECTROLYTIC 10UF 6V
C5302	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5303	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5304	0893173	CERAMIC CHIP 680PF+-5% 50V
C5305	0893239	CERAMIC CHIP 0.01UF 50V
C5306	0893239	CERAMIC CHIP 0.01UF 50V
C5308	0893246	CERAMIC CHIP 0.047UF+80-20% 50V
C5309	0893239	CERAMIC CHIP 0.01UF 50V
C5310	0893125	CERAMIC CHIP 82PF+-5% 50V
C5311	0893239	CERAMIC CHIP 0.01UF 50V
C5312	0893027	CERAMIC CHIP 0.1UF+-10% 25V
C5314	0893072	CERAMIC CHIP 0.47UF+80-20% 25V
C5315	0893222	CERAMIC CHIP 0.01UF+-10% 50V
C5316	0893054	CHIP CERAMIC 0.068UF+80-20% 16V
C5317	0893054	CHIP CERAMIC 0.068UF+80-20% 16V
C5318	0893054	CHIP CERAMIC 0.068UF+80-20% 16V
C5319	AD10275R	ELECTROLYTIC 10UF 20V
C5320	0893027	CERAMIC CHIP 0.1UF+-10% 25V
C5321	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5322	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5323	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5324	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5325	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5326	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5327	0893222	CERAMIC CHIP 0.01UF+-10% 50V
C5330	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5331	0806129	ELECTROLYTIC 22UF 10V
C5332	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C5333	0806129	ELECTROLYTIC 22UF 10V
C5334	AA00802R	CERAMIC CHIP 10UF+80-20% 16V
C5335	0806115	ELECTROLYTIC 2.2UF 16V
C5336	0893219	CERAMIC CHIP 0.0068UF+-10% 50V
C5337	0893121	CERAMIC CHIP 39PF+-5% 50V
C5401	0893093	CERAMIC CHIP 2.2UF+80-20% 16V
C5402	0893222	CERAMIC CHIP 0.01UF+-10% 50V
C5403	0806133	ELECTROLYTIC 10UF 6V
C5404	0893093	CERAMIC CHIP 2.2UF+80-20% 16V
C5405	0806122	ELECTROLYTIC 68UF 6.3V
C5406	0893095	CERAMIC CHIP 0.33UF+-10% 16V
C5407	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5408	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5409	0893093	CERAMIC CHIP 2.2UF+80-20% 16V
C5410	0893093	CERAMIC CHIP 2.2UF+80-20% 16V
C5411	AD10275R	ELECTROLYTIC 10UF 20V
C5412	0893116	CERAMIC CHIP 18PF+-5% 50V
C5413	0893127	CERAMIC CHIP 120PF+-5% 50V
C5414	0893208	CERAMIC CHIP 1000PF+-10% 50V
C5415	0806131	CHIP CAPACITOR 2.2UF+-20% 20V
C5416	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5417	0893093	CERAMIC CHIP 2.2UF+80-20% 16V
C5418	0893093	CERAMIC CHIP 2.2UF+80-20% 16V
C5419	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C5420	0893093	CERAMIC CHIP 2.2UF+80-20% 16V
C5421	0893093	CERAMIC CHIP 2.2UF+80-20% 16V
C5422	AD10275R	ELECTROLYTIC 10UF 20V
C5501	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C5502	0893093	CERAMIC CHIP 2.2UF+80-20% 16V
C5503	0806122	ELECTROLYTIC 68UF 6.3V
C5504	0893184	CERAMIC CHIP 0.022UF+-10% 16V
C5505	0893193	CERAMIC CHIP 0.01UF+-10% 25V
C5506	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C5507	0806129	ELECTROLYTIC 22UF 10V
C5508	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C5509	0893116	CERAMIC CHIP 18PF+-5% 50V
C5510	0893118	CERAMIC CHIP 27PF+-5% 50V
C5511	AD10276R	ELECTROLYTIC 33UF 10V
C5512	0202328	CERAMIC CHIP 1.0UF+80-20% 16V
C5513	AF10112R	CAPACITOR 0.01UF+-5% 50V
C5514	AA10644R	CERAMIC CHIP 12PF+-5% 3KV
C5515	AF10112R	CAPACITOR 0.01UF+-5% 50V
C5516	AF10112R	CAPACITOR 0.01UF+-5% 50V
C5517	AF10112R	CAPACITOR 0.01UF+-5% 50V
C5601	0893122	CERAMIC CHIP 47PF+-5% 50V
C5602	0893125	CERAMIC CHIP 82PF+-5% 50V
C5603	0893208	CERAMIC CHIP 1000PF+-10% 50V
C5604	0893027	CERAMIC CHIP 0.1UF+-10% 25V
C5605	0893172	CERAMIC CHIP 560PF+-5% 50V
C5606	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5607	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5608	0806119	ELECTROLYTIC 4.7UF 10V
C5609	0806136	ELECTROLYTIC 22UF 16V
C5610	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5611	0806133	ELECTROLYTIC 10UF 6V
C5612	0893027	CERAMIC CHIP 0.1UF+-10% 25V
C5613	0893179	CERAMIC CHIP 0.1UF+-10% 16V
C5614	0893179	CERAMIC CHIP 0.1UF+-10% 16V
C5701	AD10252R	ELECTROLYTIC 1.0UF 20V
C5703	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5704	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
C5705	0893232	CERAMIC CHIP 0.1UF+80-20% 25V
R0010	0103930	CHIP RESISTOR 3900HM+-5% 1/8W
R0011	0103838	RESISTOR CHIP 3900HM+-5% 0.1W
R0101	0790024	CHIP RESISTOR 100 OHM+-5% 1/16W
R0102	0790007	CHIP RESISTOR 5.6 OHM+-5% 1/16W
R0103	0790007	CHIP RESISTOR 5.6 OHM+-5% 1/16W
R0104	0790024	CHIP RESISTOR 100 OHM+-5% 1/16W
R0105	0790028	CHIP RESISTOR 220 OHM+-5% 1/16W
R0106	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R0107	0790054	CHIP RESISTOR 18KOHM+-5% 1/16W
R0108	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R0109	0790036	CHIP RESISTOR 820 OHM+-5% 1/16W
R0110	0790076	CHIP RESISTOR 820KOHM+-5% 1/16W
R0111	0790042	CHIP RESISTOR 2.2KOHM+-5% 1/16W
R0112	0790024	CHIP RESISTOR 100 OHM+-5% 1/16W
R0113	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R0114	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R0115	0790029	CHIP RESISTOR 270 OHM+-5% 1/16W
R0116	0790034	CHIP RESISTOR 560 OHM+-5% 1/16W
R0119	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0120	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0121	0790008	CHIP RESISTOR 6.8 OHM+-5% 1/16W
R0122	0790033	CHIP RESISTOR 470 OHM+-5% 1/16W
R0123	0790034	CHIP RESISTOR 560 OHM+-5% 1/16W
R0124	0790057	CHIP RESISTOR 33KOHM+-5% 1/16W
R0125	0790062	CHIP RESISTOR 68KOHM+-5% 1/16W
R0127	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0128	0790041	CHIP RESISTOR 1.8KOHM+-5% 1/16W
R0129	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W

SYMBOL NO	P-NO	DESCRIPTION
R0130	0790041	CHIP RESISTOR 1.8KOHM+-5% 1/16W
R0132	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R0133	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0134	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0138	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R0142	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R0143	0790033	CHIP RESISTOR 470 OHM+-5% 1/16W
R0144	0790034	CHIP RESISTOR 560 OHM+-5% 1/16W
R0146	0790033	CHIP RESISTOR 470 OHM+-5% 1/16W
R0147	0790035	CHIP RESISTOR 680 OHM+-5% 1/16W
R0148	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R0149	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R0150	0790041	CHIP RESISTOR 1.8KOHM+-5% 1/16W
R0152	0790032	CHIP RESISTOR 390 OHM+-5% 1/16W
R0153	0790041	CHIP RESISTOR 1.8KOHM+-5% 1/16W
R0154	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R0156	0790029	CHIP RESISTOR 270 OHM+-5% 1/16W
R0157	0790045	CHIP RESISTOR 3.9KOHM+-5% 1/16W
R0158	0790038	CHIP RESISTOR 1.2KOHM+-5% 1/16W
R0159	0790034	CHIP RESISTOR 560 OHM+-5% 1/16W
R0160	0790029	CHIP RESISTOR 270 OHM+-5% 1/16W
R0161	0790034	CHIP RESISTOR 560 OHM+-5% 1/16W
R0162	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0164	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R0165	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0167	0790028	CHIP RESISTOR 220 OHM+-5% 1/16W
R0170	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R0171	0790061	CHIP RESISTOR 56KOHM+-5% 1/16W
R0172	0790035	CHIP RESISTOR 680 OHM+-5% 1/16W
R0173	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0174	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0175	0790042	CHIP RESISTOR 2.2KOHM+-5% 1/16W
R0176	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R0179	0790031	CHIP RESISTOR 330 OHM+-5% 1/16W
R0180	0790025	CHIP RESISTOR 120 OHM+-5% 1/16W
R0181	0790063	CHIP RESISTOR 82KOHM+-5% 1/16W
R0182	0790033	CHIP RESISTOR 470 OHM+-5% 1/16W
R0183	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R0184	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0185	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R0186	0790058	CHIP RESISTOR 39KOHM+-5% 1/16W
R0187	0790033	CHIP RESISTOR 470 OHM+-5% 1/16W
R0188	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0190	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0191	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R0192	0790056	CHIP RESISTOR 27KOHM+-5% 1/16W
R0193	0790033	CHIP RESISTOR 470 OHM+-5% 1/16W
R0194	0790033	CHIP RESISTOR 470 OHM+-5% 1/16W
R0196	0790043	CHIP RESISTOR 2.7KOHM+-5% 1/16W
R0198	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0199	0790041	CHIP RESISTOR 1.8KOHM+-5% 1/16W
R0203	0790048	CHIP RESISTOR 6.8KOHM+-5% 1/16W
R0205	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R0208	0790038	CHIP RESISTOR 1.2KOHM+-5% 1/16W
R0212	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R0215	0790054	CHIP RESISTOR 18KOHM+-5% 1/16W
R0216	0790041	CHIP RESISTOR 1.8KOHM+-5% 1/16W
R0217	0790048	CHIP RESISTOR 6.8KOHM+-5% 1/16W
R0218	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R0219	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0222	0790072	CHIP RESISTOR 390KOHM+-5% 1/16W
R0223	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0224	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0228	0790062	CHIP RESISTOR 68KOHM+-5% 1/16W
R0230	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0231	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R0237	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R0238	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R0239	0790029	CHIP RESISTOR 270 OHM+-5% 1/16W
R0240	0790054	CHIP RESISTOR 18KOHM+-5% 1/16W
R0241	0790057	CHIP RESISTOR 33KOHM+-5% 1/16W
R0244	0790042	CHIP RESISTOR 2.2KOHM+-5% 1/16W
R0246	0790042	CHIP RESISTOR 2.2KOHM+-5% 1/16W
R0250	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0251	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0252	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0253	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0254	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0257	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R0258	0790036	CHIP RESISTOR 820 OHM+-5% 1/16W
R0259	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0261	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0267	0790052	CHIP RESISTOR 12KOHM+-5% 1/16W
R0268	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0273	0790048	CHIP RESISTOR 6.8KOHM+-5% 1/16W
R0275	0790053	CHIP RESISTOR 15KOHM+-5% 1/16W
R0276	0790042	CHIP RESISTOR 2.2KOHM+-5% 1/16W
R0278	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R0280	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R0281	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R0295	0790052	CHIP RESISTOR 12KOHM+-5% 1/16W
R0296	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R0298	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R0302	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R0303	0790053	CHIP RESISTOR 15KOHM+-5% 1/16W
R0305	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0310	AQ00221R	CHIP RESISTOR 10KOHM+-1% 1/16W
R0311	0790042	CHIP RESISTOR 2.2KOHM+-5% 1/16W
R0313	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R0314	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R0316	0790041	CHIP RESISTOR 1.8KOHM+-5% 1/16W
R0317	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0318	0790056	CHIP RESISTOR 27KOHM+-5% 1/16W
R0319	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R0324	0790045	CHIP RESISTOR 3.9KOHM+-5% 1/16W
R0325	0790036	CHIP RESISTOR 820 OHM+-5% 1/16W
R0326	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R0327	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0328	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0330	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R0333	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0334	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R0335	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0336	0790038	CHIP RESISTOR 1.2KOHM+-5% 1/16W
R0339	0790048	CHIP RESISTOR 6.8KOHM+-5% 1/16W
R0340	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R0341	0790029	CHIP RESISTOR 270 OHM+-5% 1/16W
R0342	0790038	CHIP RESISTOR 1.2KOHM+-5% 1/16W
R0343	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0344	0790036	CHIP RESISTOR 820 OHM+-5% 1/16W
R0346	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R0347	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0354	0790042	CHIP RESISTOR 2.2KOHM+-5% 1/16W
R0355	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0356	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0357	AQ00203R	CHIP RESISTOR 2.2KOHM+-1% 1/16W
R0359	0790049	CHIP RESISTOR 8.2KOHM+-5% 1/16W
R0364	0790075	CHIP RESISTOR 680KOHM+-5% 1/16W
R0366	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0371	0790066	CHIP RESISTOR 150KOHM+-5% 1/16W

SYMBOL NO	P-NO	DESCRIPTION
R0373	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R0374	0790028	CHIP RESISTOR 220 OHM+-5% 1/16W
R0382	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0383	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0384	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0390	0104093	CHIP RESSISTOR 75 OHM+-5% 1/16W
R0391	0104093	CHIP RESSISTOR 75 OHM+-5% 1/16W
R0394	0893193	CERAMIC CHIP 0.01UF+-10% 25V
R0397	0104093	CHIP RESSISTOR 75 OHM+-5% 1/16W
R0399	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0401M	0790048	CHIP RESISTOR 6.8KOHM+-5% 1/16W
R0402M	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R0405M	0790057	CHIP RESISTOR 33KOHM+-5% 1/16W
R0410M	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R0412M	0790069	CHIP RESISTOR 0.27MOHM+-5% 1/16W
R0414M	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0417M	0790042	CHIP RESISTOR 2.2KOHM+-5% 1/16W
R0419M	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0420M	0790036	CHIP RESISTOR 820 OHM+-5% 1/16W
R0421M	0790043	CHIP RESISTOR 2.7KOHM+-5% 1/16W
R0422M	0790062	CHIP RESISTOR 68KOHM+-5% 1/16W
R0423M	0790062	CHIP RESISTOR 68KOHM+-5% 1/16W
R0424M	0790057	CHIP RESISTOR 33KOHM+-5% 1/16W
R0425M	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0426M	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0427M	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0429M	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0430M	0790058	CHIP RESISTOR 39KOHM+-5% 1/16W
R0431M	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0432M	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0436M	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R0437M	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R0441M	0790058	CHIP RESISTOR 39KOHM+-5% 1/16W
R0443M	0790058	CHIP RESISTOR 39KOHM+-5% 1/16W
R0459M	0790043	CHIP RESISTOR 2.7KOHM+-5% 1/16W
R0463M	0790053	CHIP RESISTOR 15KOHM+-5% 1/16W
R0501	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R0502	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R0504	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0505	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0506	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0507	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0508	0790049	CHIP RESISTOR 8.2KOHM+-5% 1/16W
R0510	0104269	CHIP RESISTOR 43KOHM+-1% 1/10W
R0511	0790057	CHIP RESISTOR 33KOHM+-5% 1/16W
R0512	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R0513	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0514	0790049	CHIP RESISTOR 8.2KOHM+-5% 1/16W
R0516	0790049	CHIP RESISTOR 8.2KOHM+-5% 1/16W
R0517	0790049	CHIP RESISTOR 8.2KOHM+-5% 1/16W
R0518	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R0519	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R0522	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R0525	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R0529	AQ00211R	CHIP RESISTOR 4.3KOHM+-1% 1/16W
R0530	0893039	CERAMIC CHIP 4700PF+-10% 50V
R0531	0104292	CHIP RESISTOR 1.0KOHM+-0.5% 1/16W
R0532	0104301	CHIP RESISTOR 4.7KOHM+-0.5% 1/16W
R0533	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0534	0790038	CHIP RESISTOR 1.2KOHM+-5% 1/16W
R0538	0893208	CERAMIC CHIP 1000PF+-10% 50V
R0539	0104297	CHIP RESISTOR 10KOHM+-0.5% 16V
R0540	0104292	CHIP RESISTOR 1.0KOHM+-0.5% 1/16W
R0541	0104301	CHIP RESISTOR 4.7KOHM+-0.5% 1/16W
R0545	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0546	0790042	CHIP RESISTOR 2.2KOHM+-5% 1/16W
R0549	0790076	CHIP RESISTOR 820KOHM+-5% 1/16W
R0550	AQ10274R	CHIP RESISTOR 46.4KOHM+-0.5% 1/16W
R0551	AQ10273R	CHIP RESISTOR 680 OHM+-0.5% 1/16W
R0552	0104301	CHIP RESISTOR 4.7KOHM+-0.5% 1/16W
R0555	0790067	CHIP RESISTOR 180KOHM+-5% 1/16W
R0556	0104303	CHIP RESISTOR 12KOHM+-0.5% 1/16W
R0558	0104301	CHIP RESISTOR 4.7KOHM+-0.5% 1/16W
R0561	0790048	CHIP RESISTOR 6.8KOHM+-5% 1/16W
R0562	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0566	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R0567	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R0583	0790023	CHIP RESISTOR 82 OHM+-5% 1/16W
R0601	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0602	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0603	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0606	AQ00223R	CHIP RESISTOR 12KOHM+-1% 1/16W
R0607	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R0608	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0609	0790053	CHIP RESISTOR 15KOHM+-5% 1/16W
R0610	AQ00223R	CHIP RESISTOR 12KOHM+-1% 1/16W
R0611	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R0612	0790045	CHIP RESISTOR 3.9KOHM+-5% 1/16W
R0613	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R0614	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R0616	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0619	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R0620	0790042	CHIP RESISTOR 2.2KOHM+-5% 1/16W
R0621	0790043	CHIP RESISTOR 2.7KOHM+-5% 1/16W
R0622	0790043	CHIP RESISTOR 2.7KOHM+-5% 1/16W
R0623	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0624	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0628	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0640	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0641	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0642	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0643	0105815	CHIP RESISTOR 0.47 OHM+-10% 1/4W
R0644	0105815	CHIP RESISTOR 0.47 OHM+-10% 1/4W
R0662	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0663	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0671	0790075	CHIP RESISTOR 680KOHM+-5% 1/16W
R0672	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R0681	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R0682	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R0691	0790041	CHIP RESISTOR 1.8KOHM+-5% 1/16W
R0692	0790041	CHIP RESISTOR 1.8KOHM+-5% 1/16W
R0693	0790041	CHIP RESISTOR 1.8KOHM+-5% 1/16W
R0694	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R0695	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R0696	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R0701	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0702	0790058	CHIP RESISTOR 39KOHM+-5% 1/16W
R0703	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0704	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0706	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0707	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0708	0790036	CHIP RESISTOR 820 OHM+-5% 1/16W
R0721	0790049	CHIP RESISTOR 8.2KOHM+-5% 1/16W
R0722	0790032	CHIP RESISTOR 390 OHM+-5% 1/16W
R0723	0790042	CHIP RESISTOR 2.2KOHM+-5% 1/16W
R0724	0790032	CHIP RESISTOR 390 OHM+-5% 1/16W
R0725	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R0728	0790049	CHIP RESISTOR 8.2KOHM+-5% 1/16W
R0729	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0733	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W

SYMBOL NO	P-NO	DESCRIPTION
R0739	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0740	0790068	CHIP RESISTOR 220KOHM+-5% 1/16W
R0741	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0744	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R0746	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0752	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0753	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0754	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0755	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0901	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R0903	0790068	CHIP RESISTOR 220KOHM+-5% 1/16W
R0904	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R0905	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R0906	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0907	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0908	0790066	CHIP RESISTOR 150KOHM+-5% 1/16W
R0909	0790061	CHIP RESISTOR 56KOHM+-5% 1/16W
R0912	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R0913	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R0914	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0915	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0916	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0917	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0918	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0919	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0920	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0921	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0922	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0923	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0924	0790045	CHIP RESISTOR 3.9KOHM+-5% 1/16W
R0925	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0926	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0927	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0928	0790075	CHIP RESISTOR 680KOHM+-5% 1/16W
R0929	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R0930	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R0931	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R0932	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R0933	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R0934	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R0935	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0938	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0941	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0942	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0943	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0944	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R0945	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0947	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0948	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0949	AQ00221R	CHIP RESISTOR 10KOHM+-1% 1/16W
R0950	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0951	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0952	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0953	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0954	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0955	AQ00221R	CHIP RESISTOR 10KOHM+-1% 1/16W
R0957	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R0958	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0961	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0962	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0963	0790052	CHIP RESISTOR 12KOHM+-5% 1/16W [330/340]
R0963	0790045	CHIP RESISTOR 3.9KOHM+-5% 1/16W[543/545/548]
R0964	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0966	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R0969	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W

SYMBOL NO	P-NO	DESCRIPTION
R0971	0790061	CHIP RESISTOR 56KOHM+-5% 1/16W
R0972	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0974	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0975	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0976	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0977	0790017	CHIP RESISTOR 33 OHM+-5% 1/16W
R0978	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0979	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0980	0790054	CHIP RESISTOR 18KOHM+-5% 1/16W
R0981	0790054	CHIP RESISTOR 18KOHM+-5% 1/16W
R0982	0790057	CHIP RESISTOR 33KOHM+-5% 1/16W
R0983	0790057	CHIP RESISTOR 33KOHM+-5% 1/16W
R0984	0790033	CHIP RESISTOR 470 OHM+-5% 1/16W
R0985	0790033	CHIP RESISTOR 470 OHM+-5% 1/16W
R0986	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0987	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R0991	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R0992	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0994	0790075	CHIP RESISTOR 680KOHM+-5% 1/16W
R0995	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0996	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0997	0790045	CHIP RESISTOR 3.9KOHM+-5% 1/16W
R0998	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R0999	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R1001	0790048	CHIP RESISTOR 6.8KOHM+-5% 1/16W
R1002	0790024	CHIP RESISTOR 100 OHM+-5% 1/16W
R1003	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R1006	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R1009	0103823	CHIP RESISTOR 22OHM+-5% 0.1W
R1101	AQ00231R	CHIP RESISTOR 24KOHM+-1% 1/16W
R1102	BM00135R	COIL
R1112	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R1113	0790028	CHIP RESISTOR 220 OHM+-5% 1/16W
R1114	0790028	CHIP RESISTOR 220 OHM+-5% 1/16W
R1115	0790012	CHIP RESISTOR 12 OHM+-5% 1/16
R1116	0790012	CHIP RESISTOR 12 OHM+-5% 1/16
R1117	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R1120	0790011	CHIP RESISTOR 10 OHM+-5% 1/16W
R1121	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R1122	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R1123	0790028	CHIP RESISTOR 220 OHM+-5% 1/16W
R1124	AQ00213R	CHIP RESISTOR 5.1KOHM+-1% 1/16W
R1126	AQ00217R	CHIP RESISTER 7.5KOHM+-1% 1/16W
R1127	AQ00249R	CHIP RESISTOR 120KOHM+-1% 1/16W
R1128	0790038	CHIP RESISTOR 1.2KOHM+-5% 1/16W
R1129	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R1130	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R1131	0104545	CHIP RESISTOR 1.24KOHM+-1% 1/16W
R1132	0790038	CHIP RESISTOR 1.2KOHM+-5% 1/16W
R1133	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R1136	0790034	CHIP RESISTOR 560 OHM+-5% 1/16W
R1137	0790052	CHIP RESISTOR 12KOHM+-5% 1/16W
R1141	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R1142	0790033	CHIP RESISTOR 470 OHM+-5% 1/16W
R1143	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R1145	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R1146	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R1147	0790057	CHIP RESISTOR 33KOHM+-5% 1/16W
R1148	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R1149	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R1150	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R1155	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R1156	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R1157	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R1158	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W

SYMBOL NO	P-NO	DESCRIPTION
R1159	0790049	CHIP RESISTOR 8.2KOHM+-5% 1/16W
R1160	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R1161	0790054	CHIP RESISTOR 18KOHM+-5% 1/16W
R1169	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R1170	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0753	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R0753	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R1175	AQ00194R	CHIP RESISTOR 1.0KOHM+-1% 1/16W
R1201	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R1202	0790069	CHIP RESISTOR 0.27MOHM+-5% 1/16W
R1203	0790053	CHIP RESISTOR 15KOHM+-5% 1/16W
R1204	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R1205	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R1206	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R1207	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R1208	0790071	CHIP RESISTOR 330KOHM+-5% 1/16W
R1209	0790068	CHIP RESISTOR 220KOHM+-5% 1/16W
R1210	0790053	CHIP RESISTOR 15KOHM+-5% 1/16W
R1211	0790071	CHIP RESISTOR 330KOHM+-5% 1/16W
R1212	0790068	CHIP RESISTOR 220KOHM+-5% 1/16W
R1213	0790053	CHIP RESISTOR 15KOHM+-5% 1/16W
R1214	0790052	CHIP RESISTOR 12KOHM+-5% 1/16W
R1215	0790052	CHIP RESISTOR 12KOHM+-5% 1/16W
R1216	AQ00231R	CHIP RESISTOR 24KOHM+-1% 1/16W
R1218	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R1220	0790031	CHIP RESISTOR 330 OHM+-5% 1/16W
R1221	0790032	CHIP RESISTOR 390 OHM+-5% 1/16W
R1222	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R1223	0790049	CHIP RESISTOR 8.2KOHM+-5% 1/16W
R1224	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R1225	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R1303	AQ00223R	CHIP RESISTOR 12KOHM+-1% 1/16W
R1308	0790032	CHIP RESISTOR 390 OHM+-5% 1/16W
R1309	0790032	CHIP RESISTOR 390 OHM+-5% 1/16W
R1310	0790032	CHIP RESISTOR 390 OHM+-5% 1/16W
R1311	0790032	CHIP RESISTOR 390 OHM+-5% 1/16W
R1312	0790061	CHIP RESISTOR 56KOHM+-5% 1/16W
R1313	0790061	CHIP RESISTOR 56KOHM+-5% 1/16W
R1314	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R1315	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R1403	0790045	CHIP RESISTOR 3.9KOHM+-5% 1/16W
R1404	0790045	CHIP RESISTOR 3.9KOHM+-5% 1/16W
R1405	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R1406	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R1407	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R1408	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R1409	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R1410	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R1411	0790067	CHIP RESISTOR 180KOHM+-5% 1/16W
R1412	0790067	CHIP RESISTOR 180KOHM+-5% 1/16W
R1413	0790024	CHIP RESISTOR 100 OHM+-5% 1/16W
R1414	0790024	CHIP RESISTOR 100 OHM+-5% 1/16W
R1416	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R5301	0790024	CHIP RESISTOR 100 OHM+-5% 1/16W
R5302	0790034	CHIP RESISTOR 560 OHM+-5% 1/16W
R5303	0790034	CHIP RESISTOR 560 OHM+-5% 1/16W
R5304	0790063	CHIP RESISTOR 82KOHM+-5% 1/16W
R5305	0790061	CHIP RESISTOR 56KOHM+-5% 1/16W
R5306	0790053	CHIP RESISTOR 15KOHM+-5% 1/16W
R5307	0790034	CHIP RESISTOR 560 OHM+-5% 1/16W
R5308	0790054	CHIP RESISTOR 18KOHM+-5% 1/16W
R5311	0104256	CHIP RESISTOR 10MOHM+-5% 1/10W
R5313	0790024	CHIP RESISTOR 100 OHM+-5% 1/16W
R5315	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R5316	0790057	CHIP RESISTOR 33KOHM+-5% 1/16W

SYMBOL NO	P-NO	DESCRIPTION
R5317	0790056	CHIP RESISTOR 27KOHM+-5% 1/16W
R5318	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R5319	0790048	CHIP RESISTOR 6.8KOHM+-5% 1/16W
R5320	0790048	CHIP RESISTOR 6.8KOHM+-5% 1/16W
R5323	0790047	CHIP RESISTOR 5.6KOHM+-5% 1/16W
R5324	0790049	CHIP RESISTOR 8.2KOHM+-5% 1/16W
R5325	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R5326	0790024	CHIP RESISTOR 100 OHM+-5% 1/16W
R5327	0790024	CHIP RESISTOR 100 OHM+-5% 1/16W
R5328	0790024	CHIP RESISTOR 100 OHM+-5% 1/16W
R5329	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R5330	0790053	CHIP RESISTOR 15KOHM+-5% 1/16W
R5331	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R5332	0790056	CHIP RESISTOR 27KOHM+-5% 1/16W
R5333	0790058	CHIP RESISTOR 39KOHM+-5% 1/16W
R5334	0790056	CHIP RESISTOR 27KOHM+-5% 1/16W
R5335	0790058	CHIP RESISTOR 39KOHM+-5% 1/16W
R5336	AQ00237R	CHIP RESISTER 43KOHM+-1% 1/16W
R5337	0790058	CHIP RESISTOR 39KOHM+-5% 1/16W
R5338	0790052	CHIP RESISTOR 12KOHM+-5% 1/16W
R5339	0790053	CHIP RESISTOR 15KOHM+-5% 1/16W
R5340	0790061	CHIP RESISTOR 56KOHM+-5% 1/16W
R5341	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R5346	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R5347	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R5348	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R5349	0790029	CHIP RESISTOR 270 OHM+-5% 1/16W
R5350	0105203	CHIP RESISTOR 18KOHM+-0.5% 1/16W
R5351	0790074	CHIP RESISTOR 560KOHM+-5% 1/16W
R5401	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R5402	0790068	CHIP RESISTOR 220KOHM+-5% 1/16W
R5404	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R5405	AQ10634R	CHIP RESISTOR 120KOHM+-0.5% 1/16W
R5406	0105197	CHIP RESISTOR 22KOHM+-0.5% 1/16W
R5407	0104727	CHIP RESISTOR 15KOHM+-1% 1/16W
R5408	0790049	CHIP RESISTOR 8.2KOHM+-5% 1/16W
R5409	0104724	CHIP RESISTOR 10KOHM+-1% 1/16W
R5410	AQ10636R	CHIP RESISTER 24KOHM+-0.5% 1/16W
R5411	AQ10637R	CHIP RESISTER 21KOHM+-0.5% 1/16W
R5412	0105191	CHIP RESISTOR 910OHM+-0.5% 1/16W
R5414	0790035	CHIP RESISTOR 680 OHM+-5% 1/16W
R5415	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R5416	0790035	CHIP RESISTOR 680 OHM+-5% 1/16W
R5417	0104251	CHIP RESISTOR 2.2 OHM+-5% 1/10W
R5420	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R5501	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R5502	AQ10634R	CHIP RESISTOR 120KOHM+-0.5% 1/16W
R5503	AQ10631R	CHIP RESISTOR 27KOHM+-0.5% 1/16W
R5504	0105196	CHIP RESISTOR 6.8KOHM+-0.5% 1/16W
R5505	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R5506	0105193	CHIP RESISTOR 1.8KOHM+-0.5% 1/16W
R5507	0105209	CHIP RESISTOR 3.3KOHM+-0.5% 1/16W
R5508	0105196	CHIP RESISTOR 6.8KOHM+-0.5% 1/16W
R5509	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R5510	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R5511	0790039	CHIP RESISTOR 1.5KOHM+-5% 1/16W
R5512	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R5513	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R5514	0790036	CHIP RESISTOR 820 OHM+-5% 1/16W
R5515	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R5518	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R5519	0790064	CHIP RESISTOR 100KOHM+-5% 1/16W
R5521	0790025	CHIP RESISTOR 120 OHM+-5% 1/16W
R5522	0790034	CHIP RESISTOR 560 OHM+-5% 1/16W
R5523	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W

SYMBOL NO	P-NO	DESCRIPTION
R5524	0790034	CHIP RESISTOR 560 OHM+-5% 1/16W
R5525	0105572	METAL FILM RESISTOR 2.7KOHM+-1% 1/10W
R5526	0105572	METAL FILM RESISTOR 2.7KOHM+-1% 1/10W
R5527	AQ00203R	CHIP RESISTOR 2.2KOHM+-1% 1/16W
R5528	AQ00203R	CHIP RESISTOR 2.2KOHM+-1% 1/16W
R5529	AQ00181R	CHIP RESISTOR 330 OHM+-1% 1/16W
R5601	AQ00236R	CHIP RESISTOR 39KOHM+-1% 1/16W
R5604	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R5606	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R5608	0790062	CHIP RESISTOR 68KOHM+-5% 1/16W
R5609	0790077	CHIP RESISTOR 1MOHM+-5% 1/16W
R5610	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R5611	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R5612	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R5613	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R5614	0790062	CHIP RESISTOR 68KOHM+-5% 1/16W
R5615	0790058	CHIP RESISTOR 39KOHM+-5% 1/16W
R5616	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R5617	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R5618	0790046	CHIP RESISTOR 4.7KOHM+-5% 1/16W
R5622	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R5623	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R5624	0790037	CHIP RESISTOR 1KOHM+-5% 1/16W
R5625	0790042	CHIP RESISTOR 2.2KOHM+-5% 1/16W
R5626	0790044	CHIP RESISTOR 3.3KOHM+-5% 1/16W
R5628	AQ00222R	CHIP RESISTER 11KOHM+-1% 1/16W
R5629	AQ00221R	CHIP RESISTOR 10KOHM+-1% 1/16W
R5630	0790057	CHIP RESISTOR 33KOHM+-5% 1/16W
R5631	0790054	CHIP RESISTOR 18KOHM+-5% 1/16W
R5632	0790055	CHIP RESISTOR 22KOHM+-5% 1/16W
R5633	0790051	CHIP RESISTOR 10KOHM+-5% 1/16W
R5634	AQ00229R	CHIP RESISTOR 22KOHM+-1% 1/16W
R5636	0790052	CHIP RESISTOR 12KOHM+-5% 1/16W
R5701	0790057	CHIP RESISTOR 33KOHM+-5% 1/16W
R5702	0790067	CHIP RESISTOR 180KOHM+-5% 1/16W
R5703	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
R5706	0790059	CHIP RESISTOR 47KOHM+-5% 1/16W
RT0103	5040201	VARIABLE RESISTOR 470 OHM
RT0203	5040205	VARIABLE RESISTOR 4.7KOHM
RT0204	0104171	CHIP RESISTOR 10KOHM+-10% 1/8W
RT0205	5040204	VARIABLE RESISTOR 10KOHM
RT0206	0104159	CHIP RESISTER 1.5KOHM+-10% 1/8W
RT0207	5040205	VARIABLE RESISTOR 4.7KOHM
RT0209	5040205	VARIABLE RESISTOR 4.7KOHM
RT0210	5040201	VARIABLE RESISTOR 470 OHM
RT0211	0104159	CHIP RESISTER 1.5KOHM+-10% 1/8W
RT0212	5040202	SEMI VARIABLE 2.2KOHM
RT0215	5040204	VARIABLE RESISTOR 10KOHM
RT0216	0104167	CHIP RESISTOR 5.6KOHM+-10% 1/8W
RT0302	5040202	SEMI VARIABLE 2.2KOHM
RT5302	0104172	CHIP RESISTOR 12KOHM+-10% 1/8W
RT5307	0104171	CHIP RESISTOR 10KOHM+-10% 1/8W
RT5308	0104171	CHIP RESISTOR 10KOHM+-10% 1/8W
RT5309	0104172	CHIP RESISTOR 12KOHM+-10% 1/8W
RT5310	0104172	CHIP RESISTOR 12KOHM+-10% 1/8W
RV5601	5040126	SEMI VARIABLE 10KOHM
RV5701	5002246	VARIABLE RESISTOR 10KOHM
RV5702	5002247	VARIABLE RESISTOR 50KOHM
D0001	CH10451	DIODE
D0101	5337422	DIODE DA221
D0201	5337351	DIODE MA132WK
D0301	5337352	DIODE MA132WA
D0302	5337351	DIODE MA132WK
D0303	CC10291R	DIODE 1SS353
D0305	5337351	DIODE MA132WK
D0352	5337351	DIODE MA132WK
D0394	5337422	DIODE DA221
D0401M	5337422	DIODE DA221
D0405M	CC10291R	DIODE 1SS353
D0406M	CC10291R	DIODE 1SS353
D0551	5337372	DIODE SB07-03C
D0552	CC10291R	DIODE 1SS353
D0553	CC10291R	DIODE 1SS353
D0601	CC10291R	DIODE 1SS353
D0901	CC10291R	DIODE 1SS353
D0902	CC10291R	DIODE 1SS353
D1002	CC10291R	DIODE 1SS353
D1101	5328305	DIODE MA151WA
D1103	5328305	DIODE MA151WA
D1104	CC10771R	DIODE SML-010LT
D1301	5337422	DIODE DA221
D5301	CC10331R	DIODE HVU200A
D5401	CC10291R	DIODE 1SS353
D5402	CC10291R	DIODE 1SS353
D5403	5326022	DIODE MA160-M1D
D5404	5337421	DIODE DAN222
D5501	CC10291R	DIODE 1SS353
D5601	CC10331R	DIODE HVU200A
D5602	CC10291R	DIODE 1SS353
ZD5701	CC10448R	DIODE MA3056M
IC0101	1366631	IC HA118189MP
IC0102	CK13461R	IC UPC5023GS-101-E1
IC0201	1366923	IC HA118192AF
IC0202	CK12051R	IC CXL5517N
IC0204	CK13471R	IC UPC5023GS-104-E1
IC0301	CK16781R	IC CXA2003N
IC0401	CK20271R	IC LA7458W
IC0551	CK16251U	IC BA9735KV
IC0601	CK18321R	IC UPC5023GS-122-E1
IC0631	CK18331R	IC LB1950V-TLR
IC0671	1366651	IC BA6417F
IC0901	CK18312U	IC CXP87240A-136R
IC0902	CK18271R	IC S84233FS-T2
IC0904	CK18262R	IC BU6294FV
IC0907	CE10171R	MODULE GP1U101X
IC1001	UE13384	CCD IMAGE SENSOR ASSY
IC1101	CK18722U	IC HD49322BF
IC1102	CK20631U	IC HG73C012TE
IC1103	CK12061R	IC UPD16510GR
IC1104	CK21151U	IC HD6433042ST36F
IC1105	CK14172R	IC S29394AFJA
IC1106	CK20601R	IC MM1320UN2V0
IC1201	CK20621R	IC UPD5023GS-147-GJG
IC1301	CK18711R	IC MPC17A34ZVM
IC1401	FU10251	SENSOR, GYRO
IC1402	FU10252	SENSOR, GYRO
IC1403	5362204	IC NJM062M-TE1
IC1404	1359931	IC TC4W66F
IC5301	CK10522U	IC IR3Y18A
IC5401	CK18431R	IC TL5001CD
IC5501	CK18431R	IC TL5001CD
IC5502	1351761	IC NJM2406F
IC5601	CK19981R	IC CM7013L2
IC5602	CK15331R	IC NJM3414AV
IC5603	1351051	IC NJM2107F
Q0001	1322341	TRANSISTOR PT4810F
Q0002	5327521	PHOTO TRANSISTOR SPI-315-C
Q0003	5327521	PHOTO TRANSISTOR SPI-315-C
Q0004	1322341	TRANSISTOR PT4810F
Q0101	1323301	TRANSISTOR 2SB1219

SYMBOL NO	P-NO	DESCRIPTION
Q0102	1323294	TRANSISTOR 2SA1774RS
Q0103	1323294	TRANSISTOR 2SA1774RS
Q0104	1323279	TRANSISTOR DTC114YE
Q0105	1323301	TRANSISTOR 2SB1219
Q0106	1323279	TRANSISTOR DTC114YE
Q0107	1323294	TRANSISTOR 2SA1774RS
Q0108	1323279	TRANSISTOR DTC114YE
Q0109	1323294	TRANSISTOR 2SA1774RS
Q0110	5328966	TRANSISTOR 2SA1037K-FST
Q0112	1323291	TRANSISTOR 2SC4617
Q0117	1323279	TRANSISTOR DTC114YE
Q0120	1323301	TRANSISTOR 2SB1219
Q0123	1323291	TRANSISTOR 2SC4617
Q0130	1323279	TRANSISTOR DTC114YE
Q0131	1323279	TRANSISTOR DTC114YE
Q0170	1323301	TRANSISTOR 2SB1219
Q0171	1323253	TRANSISTOR XP4401
Q0173	1323253	TRANSISTOR XP4401
Q0175	1323291	TRANSISTOR 2SC4617
Q0176	1323294	TRANSISTOR 2SA1774RS
Q0178	1323291	TRANSISTOR 2SC4617
Q0179	1323294	TRANSISTOR 2SA1774RS
Q0211	1323291	TRANSISTOR 2SC4617
Q0212	1323279	TRANSISTOR DTC114YE
Q0213	1323278	TRANSISTOR DTA114YE
Q0215	1323279	TRANSISTOR DTC114YE
Q0216	1323279	TRANSISTOR DTC114YE
Q0217	1323279	TRANSISTOR DTC114YE
Q0225	1323294	TRANSISTOR 2SA1774RS
Q0226	1323279	TRANSISTOR DTC114YE
Q0232	1323294	TRANSISTOR 2SA1774RS
Q0301	1323301	TRANSISTOR 2SB1219
Q0302	1323279	TRANSISTOR DTC114YE
Q0303	1323291	TRANSISTOR 2SC4617
Q0305	1323279	TRANSISTOR DTC114YE
Q0306	1323278	TRANSISTOR DTA114YE
Q0307	1323291	TRANSISTOR 2SC4617
Q0308	1323279	TRANSISTOR DTC114YE
Q0309	1323294	TRANSISTOR 2SA1774RS
Q0350	1323291	TRANSISTOR 2SC4617
Q0352	1323294	TRANSISTOR 2SA1774RS
Q0356	1323291	TRANSISTOR 2SC4617
Q0357	1323279	TRANSISTOR DTC114YE
Q0358	1323291	TRANSISTOR 2SC4617
Q0360	1323279	TRANSISTOR DTC114YE
Q0361	1323278	TRANSISTOR DTA114YE
Q0362	1323279	TRANSISTOR DTC114YE
Q0363	1323279	TRANSISTOR DTC114YE
Q0364	1323279	TRANSISTOR DTC114YE
Q0365	1323279	TRANSISTOR DTC114YE
Q0366	1323278	TRANSISTOR DTA114YE
Q0367	1323278	TRANSISTOR DTA114YE
Q0368	1323279	TRANSISTOR DTC114YE
Q0370	1323291	TRANSISTOR 2SC4617
Q0371	1323291	TRANSISTOR 2SC4617
Q0372	1323294	TRANSISTOR 2SA1774RS
Q0373	1323279	TRANSISTOR DTC114YE
Q0374	1323279	TRANSISTOR DTC114YE
Q0395	1323291	TRANSISTOR 2SC4617
Q0401M	1323291	TRANSISTOR 2SC4617
Q0402M	1323291	TRANSISTOR 2SC4617
Q0403M	1323278	TRANSISTOR DTA114YE
Q0405M	1323294	TRANSISTOR 2SA1774RS
Q0551	1308011	TRANSISTOR MPL1
Q0552	CA10271R	TRANSISTOR 2SB1424
Q0553	CA10271R	TRANSISTOR 2SB1424
Q0555	CA10271R	TRANSISTOR 2SB1424
Q0556	1323279	TRANSISTOR DTC114YE
Q0557	CA10271R	TRANSISTOR 2SB1424
Q0558	1323291	TRANSISTOR 2SC4617
Q0559	1308011	TRANSISTOR MPL1
Q0561	1308011	TRANSISTOR MPL1
Q0562	1308011	TRANSISTOR MPL1
Q0563	1323279	TRANSISTOR DTC114YE
Q0601	1323278	TRANSISTOR DTA114YE
Q0602	1323291	TRANSISTOR 2SC4617
Q0603	1323291	TRANSISTOR 2SC4617
Q0604	1323291	TRANSISTOR 2SC4617
Q0901	1323294	TRANSISTOR 2SA1774RS
Q0902	1323291	TRANSISTOR 2SC4617
Q0903	1323278	TRANSISTOR DTA114YE
Q0904	1323294	TRANSISTOR 2SA1774RS
Q0905	5328975	TRANSISTOR 2SC2412K
Q0907	1323279	TRANSISTOR DTC114YE
Q0909	1323279	TRANSISTOR DTC114YE
Q0911	1323291	TRANSISTOR 2SC4617
Q0912	1323291	TRANSISTOR 2SC4617
Q1001	5328221	TRANSISTOR 2SC2620-QC
Q1101	5328966	TRANSISTOR 2SA1037K-FST
Q1102	5328975	TRANSISTOR 2SC2412K
Q1103	5328966	TRANSISTOR 2SA1037K-FST
Q1108	1323279	TRANSISTOR DTC114YE
Q1201	5328975	TRANSISTOR 2SC2412K
Q1202	5328975	TRANSISTOR 2SC2412K
Q1203	1323141	TRANSISTOR 2SC2411K
Q1401	1323279	TRANSISTOR DTC114YE
Q5301	1323294	TRANSISTOR 2SA1774RS
Q5401	1323272	TRANSISTOR DTA144EE
Q5402	1323271	TRANSISTOR DTC144EE
Q5403	1323294	TRANSISTOR 2SA1774RS
Q5404	1323271	TRANSISTOR DTC144EE
Q5405	1323293	TRANSISTOR 2SC4617 (R/S)
Q5406	CA10793R	TRANSISTOR 2SB1122ST
Q5501	1323272	TRANSISTOR DTA144EE
Q5502	1323279	TRANSISTOR DTC114YE
Q5503	1323271	TRANSISTOR DTC144EE
Q5504	1323271	TRANSISTOR DTC144EE
Q5505	1323293	TRANSISTOR 2SC4617 (R/S)
Q5506	1323293	TRANSISTOR 2SC4617 (R/S)
Q5507	1323271	TRANSISTOR DTC144EE
Q5508	1323272	TRANSISTOR DTA144EE
Q5509	1323271	TRANSISTOR DTC144EE
Q5510	1323293	TRANSISTOR 2SC4617 (R/S)
Q5511	CA10771R	TRANSISTOR FP102-TL
Q5512	1323012	TRANSISTOR 2SC3647
Q5513	1323012	TRANSISTOR 2SC3647
Q5514	1323278	TRANSISTOR DTA114YE
Q5601	1323279	TRANSISTOR DTC114YE
Q5602	1323279	TRANSISTOR DTC114YE
T0551	5148333	TRANSFORMAR, POWER
T5401	BC10241R	COIL
T5501	BC10201U	TRANSFORMER
L0101	0773001	CHOCE COIL 10UH+-10%
L0102	0773004	COIL 100UH
L0103	0773124	CHOKE COIL 27UH+-5%
L0104	0773001	CHOCE COIL 10UH+-10%
L0105	0773117	CHOKE COIL 8.2UH+-5%
L0107	BA10315R	COIL 150UH
L0108	0773135	CHOKE COIL 180UH+-5%
L0109	BA10318R	COIL 470UH

SYMBOL NO	P-NO	DESCRIPTION
L0110	0773124	CHOKE COIL 27UH+-5%
L0111	BA10317R	COIL 330UH
L0171	0773001	CHOCE COIL 10UH+-10%
L0172	BA10313R	COIL 68UH
L0173	BA10308R	COIL 15UH
L0202	0773013	COIL 8.2KUH
L0204	0773133	CHOKE COIL 120UH+-5%
L0205	0773003	COIL 47UH
L0206	0773003	COIL 47UH
L0301	0773001	CHOCE COIL 10UH+-10%
L0350	0773003	COIL 47UH
L0401M	0773003	COIL 47UH
L0403M	0773003	COIL 47UH
L0404M	0773003	COIL 47UH
L0551	BA10127R	COIL 10UH
L0552	BA10128R	COIL 22UH
L0554	BA10128R	COIL 22UH
L0556	BA10127R	COIL 10UH
L0559	0773004	COIL 100UH
L0560	0773004	COIL 100UH
L0561	BA10129R	COIL 47UH
L0563	BA10127R	COIL 10UH
L0564	BA10129R	COIL 47UH
L0565	BA10129R	COIL 47UH
L0566	0773001	CHOCE COIL 10UH+-10%
L0601	0773002	COIL 22UH
L0902	BA10308R	COIL 15UH
L0903	0773002	COIL 22UH
L0904	0773001	CHOCE COIL 10UH+-10%
L0906	0773002	COIL 22UH
L0908	0773003	COIL 47UH
L0909	0773003	COIL 47UH
L1101	0773003	COIL 47UH
L1102	0773001	CHOCE COIL 10UH+-10%
L1103	BA10314R	COIL 100UH
L1104	0773003	COIL 47UH
L1105	0773001	CHOCE COIL 10UH+-10%
L1106	0773001	CHOCE COIL 10UH+-10%
L1109	0773005	COIL 220UH
L1301	0773002	COIL 22UH
L5301	BA10336R	COIL 47UH
L5302	BA10334R	COIL 10UH
L5303	BA10149R	COIL 33UH
L5304	BA10149R	COIL 33UH
L5401	BA10334R	COIL 10UH
L5402	BA10337R	COIL 100UH
L5403	BA10337R	COIL 100UH
L5404	BA10337R	COIL 100UH
L5501	BA10333R	COIL 4.7UH
L5502	BA10136R	COIL 22UH
L5503	BA10137R	COIL 150UH
L5601	BA10334R	COIL 10UH
L5602	BA10334R	COIL 10UH
L5603	BA10334R	COIL 10UH
L5605	BA10334R	COIL 10UH
L5606	BA10145R	COIL
X0201	1930212	CRYSTAL
X0901	BL10572R	CRYSTAL
X0902	BL10311R	CRYSTAL
X1101	1930093	CRYSTAL
X5301	BL10193R	CRYSTAL
CN0901	1880371	CONNECTOR
CP0202	BE10232R	COIL 12.2UH
CP0203	BE10342R	FILTER, BAND PASS
CP0204	BE10345R	FILTER, BAND PASS
CP1101	BE10411R	FILTER, LOW PASS
⚠F0551	FM10132R	FUSE 1.6A
⚠F0552	FM10134R	FUSE 125V
⚠F0553	FM10134R	FUSE 125V
JK0200	5695292	JACK
PG0001	EA11061R	PLUG
PG0101	EA10501R	PLUG
PG0401L	5668671	MINI PLUG
PG0402	5669191	PLUG
PG0551	5669175	PLUG
PG0601	5692362	MINI PLUG
PG0602	EA10641R	PLUG
PG0603	EA10501R	PLUG
PG0604	5668671	MINI PLUG
PG0901	EA10651R	PLUG
PG0902	5668754	PLUG
PG0903	5669193	MINI PLUG
PG0904	5669201	PLUG
PG0905	5669166	PLUG
PG1001	1830344	PLUG
PG1101	1830343	PLUG
PG1103	1830355	PLUG
PG1301	EA10377R	PLUG
PG5501	EA10132R	PLUG
PG5701	5669201	PLUG
PG5702	EA11304R	PLUG
S0003	5636171	SWITCH
S0004	5636171	SWITCH
S0005	5636171	SWITCH
S0006	5635331	SWITCH
S0007	5613523	SWITCH
SW0902	1742011	SWITCH
SW0903	1742011	SWITCH
SW0904	1742011	SWITCH
SW0905	1742011	SWITCH
SW0906	FB10201R	SWITCH
SW5701	FB10201R	SWITCH

ELECTRONIC VIEWFINDER(EMQ) SECTION

C2001	0806169	ELECTROLYTIC 47UF 16V
C2002	0806169	ELECTROLYTIC 47UF 16V
C2003	0806146	ELECTROLYTIC 2.2UF 50V
C2004	0268437	POLYPROPYLENE 4700PF+-5%50V
C2005	0256871	ELECTROLYTIC 47UF 25V
C2006	0249655	CERAMIC CHIP 1000PF+-10% 1000V
C2007	0249656	CERAMIC CHIP 1000PF+-10% 500V
C2008	0806146	ELECTROLYTIC 2.2UF 50V
C2009	0893086	CERAMIC CHIP 0.1UF+80-20% 50V
C2011	0209852	CERAMIC CHIP 180PF+-5% 50V
C2012	0893086	CERAMIC CHIP 0.1UF+80-20% 50V
C2013	0893086	CERAMIC CHIP 0.1UF+80-20% 50V
C2014	0268521	MYLAR 0.1UF+-10% 50V
C2015	0202151	CERAMIC CHIP 2200PF+-5% 50V
C2016	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C2017	0806145	ELECTROLYTIC 1UF 50V
C2018	0893062	CERAMIC CHIP 1UF+80-20% 16V
R2001	0103852	CHIP RESISTOR 5.6KOHM+-5% 0.1W
R2002	0103869	CHIP RESISTOR 150KOHM+-5% 0.1W
R2003	0103876	CHIP RESISTOR 560KOHM+-5% 0.1W
R2004	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R2005	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R2006	0103819	CHIP RESISTOR 10 OHM+-5% 0.1W
R2007	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R2008	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W

SYMBOL NO	P-NO	DESCRIPTION
R2009	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R2011	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
R2012	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R2013	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
R2014	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W
R2015	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R2016	0103814	CHIP RESISTOR 3.9 OHM+-10% 0.1W
R2017	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W
R2018	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R2019	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W
R2020	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R2021	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R2022	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R2024	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R2025	0103874	CHIP RESISTOR 390KOHM+-5% 0.1W
R2026	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
RT2001	5035204	SEMI VARIABLE 2.2MOHM
RT2002	5030251	SEMI VARIABLE 1MOHM
RT2003	5040103	SEMI VARIABLE 470 OHM
D2001	5337133	DIODE MA141K
D2002	5337321	DIODE MA199
IC2001	1365881	IC HA118179F
Q2001	5323831	TRANSISTOR 2SD974
Q2002	5326682	TRANSISTOR XN1B301
⚠T2001	5240567	TRANS
L2001	0773003	COIL 47UH
L2002	5244017	COIL
⚠CS2001	EF11241	SOCKET
PG2001	5669631	CONNECTOR
PG2002	5668469	PLUG
⚠TF2001	5721352	FUSE

SYMBOL NO	P-NO	DESCRIPTION

CHAPTER 6 SCHEMATIC, CIRCUIT BOARD AND BLOCK DIAGRAMS

Applied Models: VM-E330E(R)
VM-E340E
VM-E534LE
VM-E545LE
VM-E548LE

Cautions when using schematic diagrams

Caution for safety
The parts marked ⚠ are critical for safety. Be sure to use the specified parts to ensure safety when replacing them.

1. Values in schematic diagrams

The values, dielectric strength (power capacitance) and tolerances of the resistors (excluding variable resistors) and capacitors are indicated in the schematic diagrams using abbreviations.

[Resistors]

Item	Indication
Value	No indication ..... Ω K ..... k Ω M ..... M Ω
Tolerance	No indication ..... ±5% (All tolerances other than ± 5% are indicated in the schematic diagrams)
Power capacitance	No indication ..... 1/8W (1/16W for leadless resistors without indication) All capacitances other than the above are indicated in the schematic diagrams.

[Capacitors]

Item	Indication
Value	No indication ..... μF P ..... pF
Dielectric strength	No indication ..... 50V (All dielectric strengths other than 50V are indicated in the schematic diagrams.)

[Coils]

Item	Indication
Value	μ ..... μH m ..... mH

Cautions when using circuit board diagrams

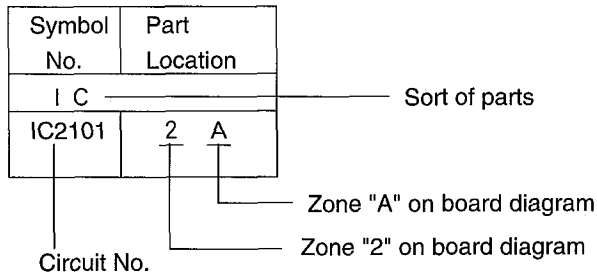
1. Identifications of sides A/B in circuit board diagrams

1) Board having a pattern on one side and parts on both sides.
   Side A: Shows discrete parts, viewed from the pattern side.
   Side B: Shows leadless parts, viewed from the pattern side.
2) Board having patterns on both sides and parts on both sides.
   Side A: Shows parts and patterns which can be seen when the case is opened.
   Side B: Shows parts and the pattern on the back of side A.

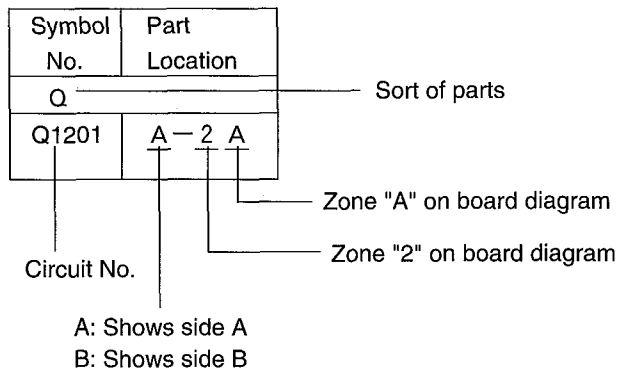
2. Table for indexing locations of parts

This table shows locations of each part on the circuit board diagrams. The locations are indicated using the guide scales on the external lines of diagrams.

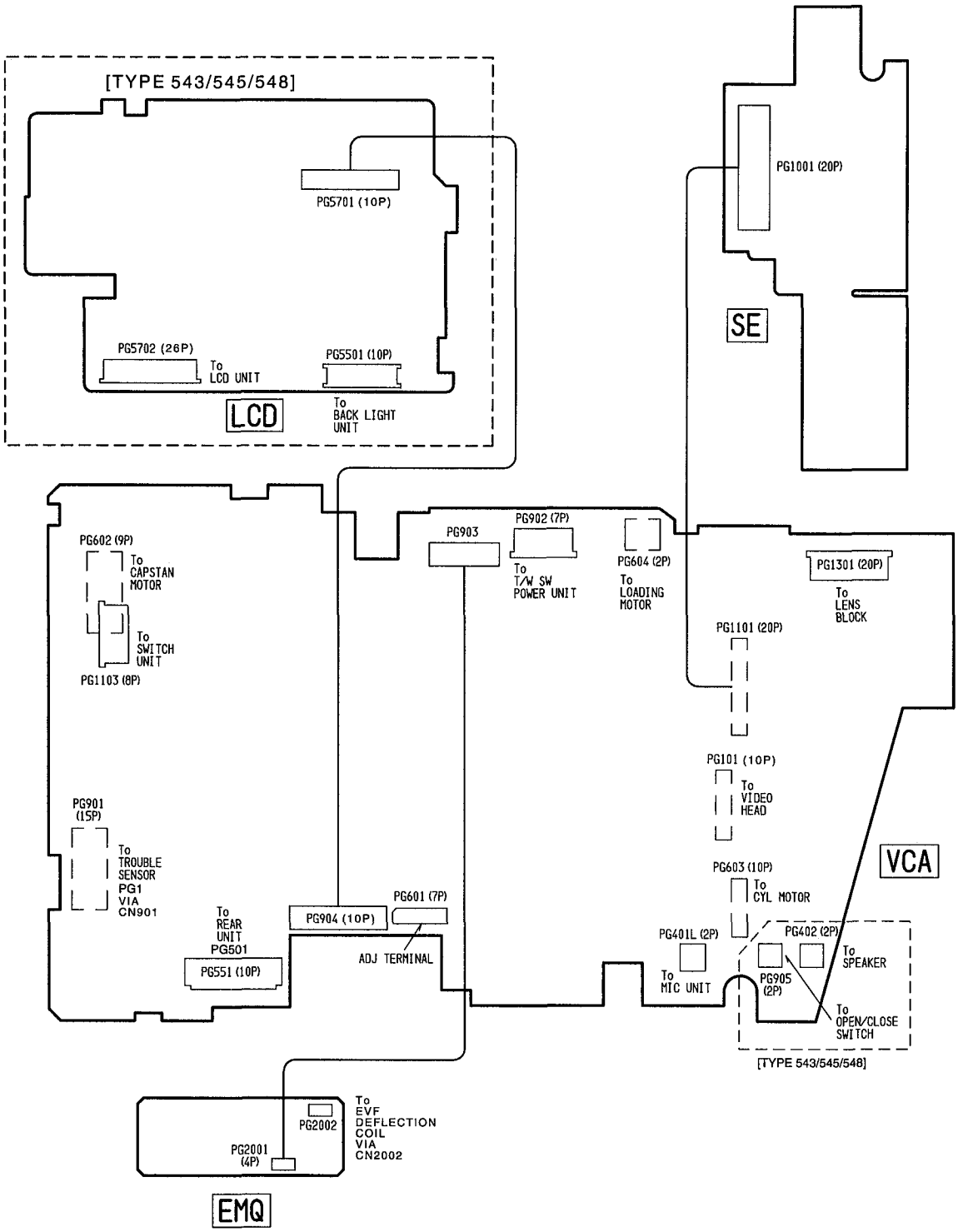
1) In case of one-layer board



2) In case of side A/B indication board



INTERNAL WIRING DIAGRAM

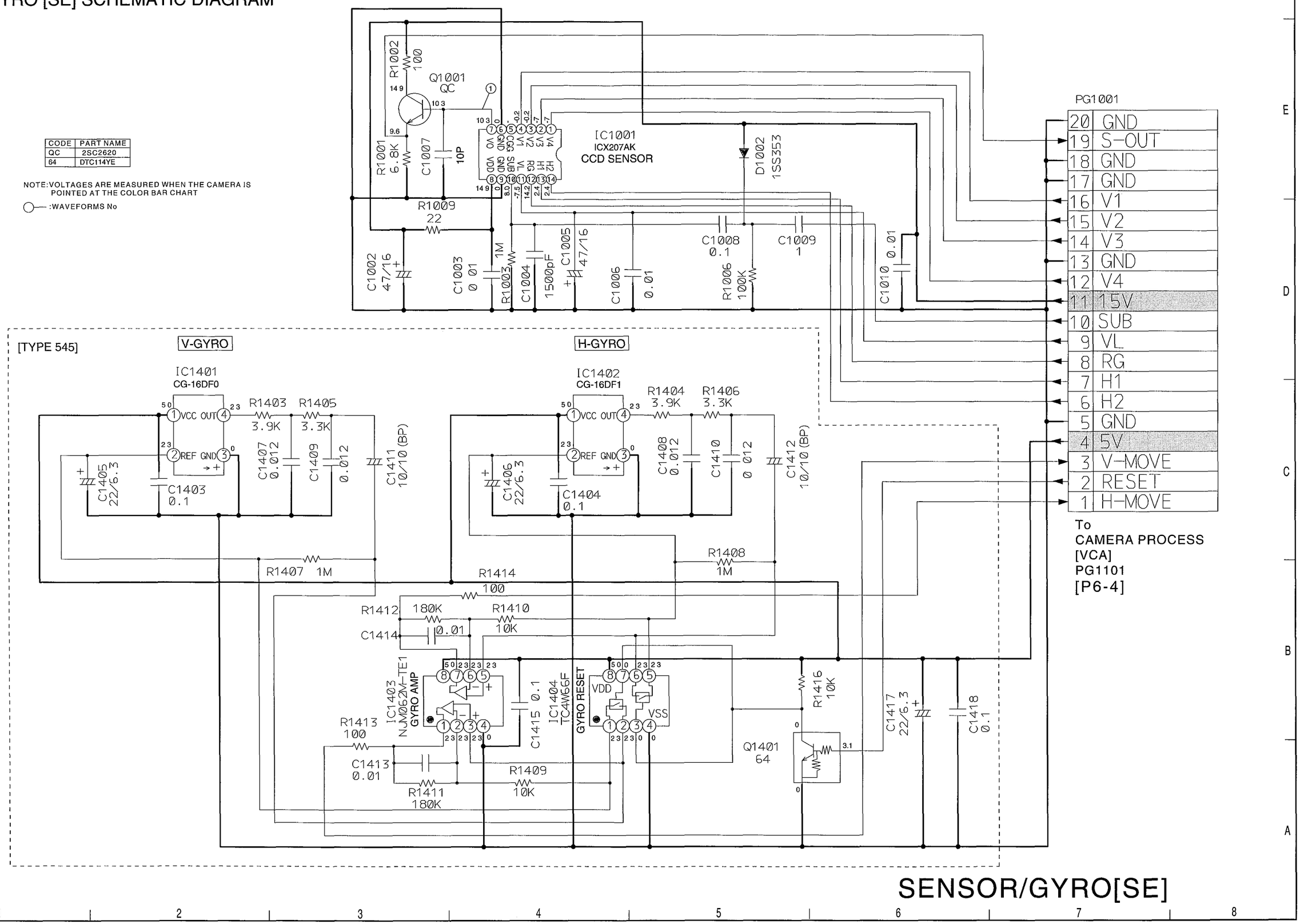


SENSOR/GYRO [SE] SCHEMATIC DIAGRAM

CODE	PART NAME
QC	2SC2620
64	DTC114YE

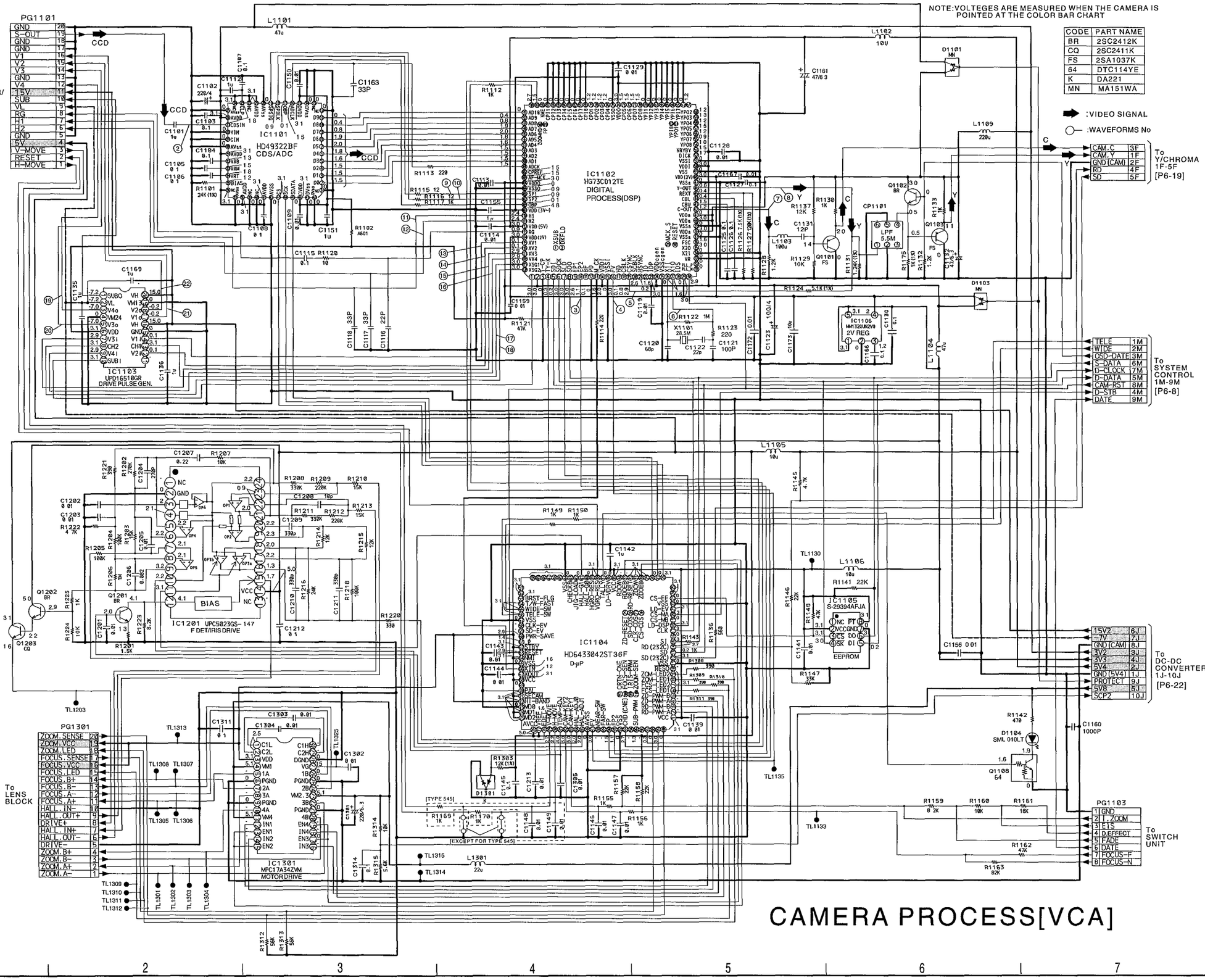
NOTE:VOLTAGES ARE MEASURED WHEN THE CAMERA IS POINTED AT THE COLOR BAR CHART

○— :WAVEFORMS No



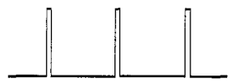
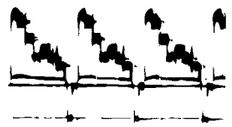
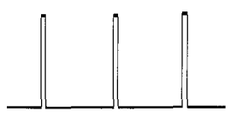
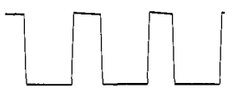
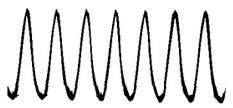
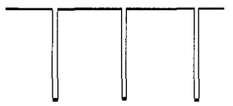
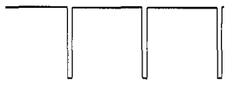
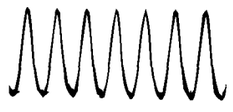
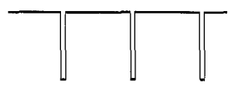
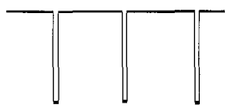
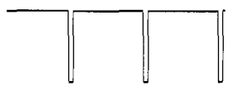
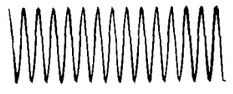
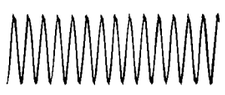
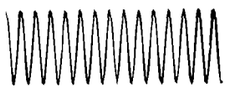
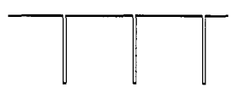
SENSOR/GYRO[SE]

CAMERA PROCESS [VCA] SCHEMATIC DIAGRAM

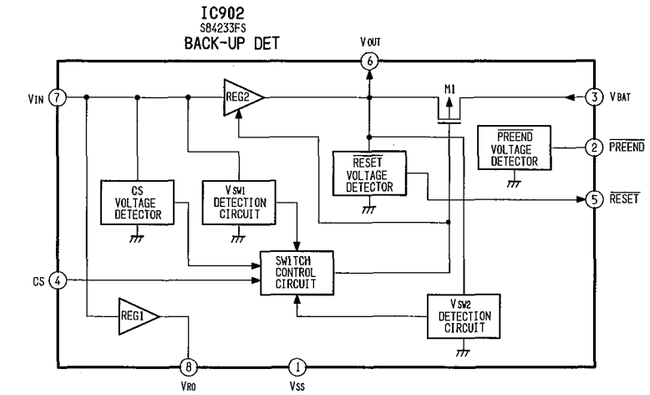


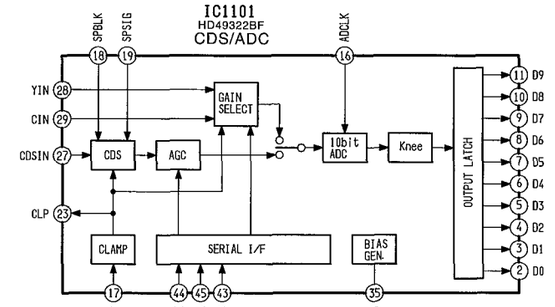
CAMERA PROCESS[VCA]

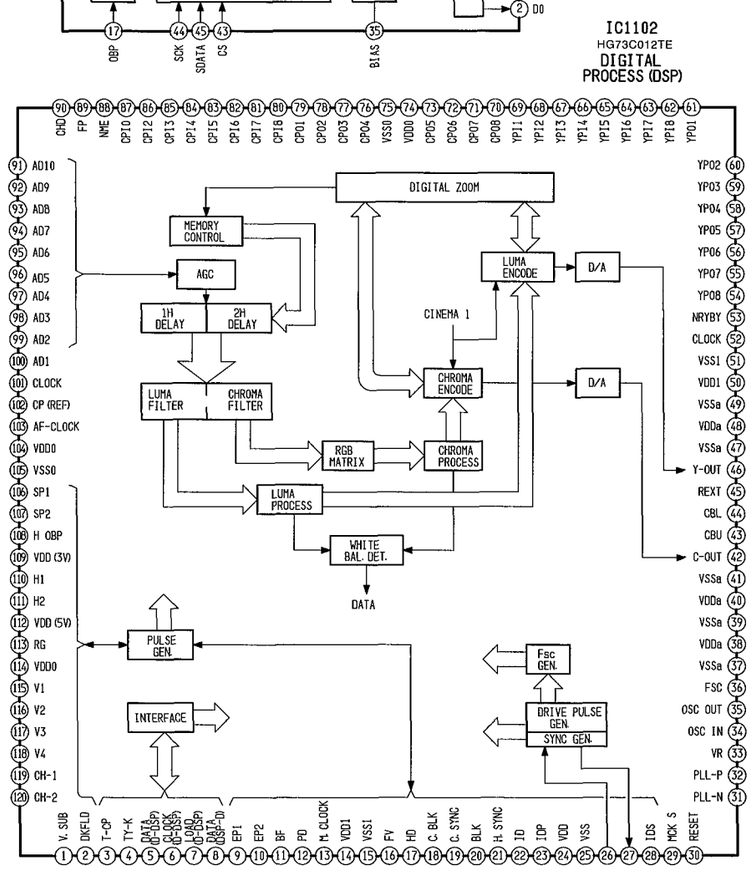
CAMERA WAVEFORMS

1-A IC1001-7 1.1Vp-p 0.2V/20 0µsec cm COLOR CHART	7-A IC1102-42 550mVp-p 0.2V/20.0µsec.cm COLOR CHART	13-A IC1102-115 3.1Vp-p 1V/20.0µsec.cm COLOR CHART	19-A IC1103-3 7 3Vp-p 2V/20.0µsec.cm COLOR CHART
			
2-A IC1101-27 1 1Vp-p 0 2V/20.0µsec cm COLOR CHART	8-A IC1102-46 1.0Vp-p 0 2V/20.0µsec.cm COLOR CHART	14-A IC1102-116 3.1Vp-p 1V/20 0µsec cm COLOR CHART	20-A IC1103-5 7.3Vp-p 2V/20 0µsec cm COLOR CHART
			
3-A IC1102-10 3 0Vp-p 1V/5 0msec.cm COLOR CHART	9-A IC1102-106 4 2Vp-p 1V/50 0nsec cm COLOR CHART	15-A IC1102-117 3 1Vp-p 1V/20.0µsec.cm COLOR CHART	21-A IC1103-17 7.3Vp-p 2V/20.0µsec cm COLOR CHART
			
4-A IC1102-16 3 0Vp-p 1V/5.0msec cm COLOR CHART	10-A IC1102-107 4 2Vp-p 1V/50 0nsec cm COLOR CHART	16-A IC1102-118 3 1Vp-p 1V/20.0µsec.cm COLOR CHART	22-A IC1103-18 7.3Vp-p 2V/20.0µsec cm COLOR CHART
			
5-A IC1102-19 3.0Vp-p 1V/20.0µsec.cm COLOR CHART	11-A IC1102-110 7.0Vp-p 2V/100nsec cm COLOR CHART	17-A IC1102-119 3.1Vp-p 1V/5.0msec.cm COLOR CHART	
			
6-A IC1102-27 1.6Vp-p 0 5V/50 0nsec.cm COLOR CHART	12-A IC1102-111 7.0Vp-p 2V/100nsec.cm COLOR CHART	18-A IC1102-120 3.1Vp-p 1V/5.0msec.cm COLOR CHART	
			

IC BLOCK DIAGRAMS







SYSTEM CONTROL [VCA] SCHEMATIC DIAGRAM

CODE	PART NAME
*BR	2SC2412K
BR	2SC4617
FR	2SA1774RS
54	DTA114YE
64	DTC114YE
C	1SS353SP

:WAVEFORMS No

※ONE VOLTAGE:PB OR REC MODE
TWO VOLTAGES:PB AND (REC) MODE

[TYPE 543/545/548]

PG0904

+B (LCD)	1
LCD-VIDEO	2
GND (LCD)	3
GND (LCD)	4
LCD-C	5
5V5	6
LCD_NOR/HI	7
LCD_REVERSE	8
SP.VOL	9
HD	10

To LCD DRIVE [LCD] PG5701 [P6-24]

To OPEN/CLOSE SWITCH

PG0905

LCD OPEN/CLOSE	1
GND	2

R0754 10K
R0755 10K

To T/W+POWER UNIT

PG0902

7	TELE
6	GND
5	WIDE
4	REC START/STOP
3	GND (5V3)
2	VCR.ON
1	CAM.ON

SW0906 SW-SPVG11R

REW/REVIEW EJECT F FWD STOP PLAY

SWP-JPM1110MT

SW0905 SW0904 SW0903 SW0902

R0725 3.3K R0724 390 R0723 2.2K R0722 390 R0721 8.2K

R0703 1K

PG0903

H.SYNC	1
GND (EVF)	2
EVF-VIDEO	3
5V5	4

To ELECTRONIC VIEWFINDER [EMQ] PG2001 [P6-26]

L0905 47u
C0943 100/6.3
C0944 100/6.3
L0903 22u
C0932 100/6.3

To DC-DC CONVERTER 1H-18H [P6-22]

5V6	7H
	8H
5V5	5H
GND (5V5)	6H
GND (5V3)	2H
BAT.S/P	15H
5V3	1H
3V1	3H
+B (VTR)	4H
	10H
GND (LCD)	18H
+B (LCD)	17H
	14H
EVF.ON	12H
LCD.ON	9H
VCR.ON	13H
ADP/BAT	11H
	16H

To AUDIO 1C-8C [P6-14]

SP.VOL	1C
T.FADE	2C
	3C
PB	4C
HSW	5C
MUTE	6C
	7C
CAM/LIN	8C

To Y/CHROMA 1E-32E [P6-18] [P6-19] [P6-20]

LCD-C	1E
	8E
CAM.SW	3E
OSD-LCD	11E
LCDVIDEO	16E
EVFVIDEO	18E
V.SYNC	15E
OSD-EVF	12E
OSD-COUNT	13E
SSB.CLK	25E
SSB.DATA	24E
TRICK	26E
PR.CONT	9E
REC	14E
	23E
GND (5V1)	17E
REM.DATA	30E
FE.CONT	2E
HD	22E
ADDV+SQ	20E
HSW	4E
CH2.REC	6E
CH1.REC	7E
HSW	5E
PB	19E
CAM/LIN	27E
	21E
S.EDIT	31E
AV.CONT	28E
REMOTE	29E
	32E
C.SYNC	10E

To CAMERA PROCESS 1M-9M [P6-5]

TELE	1M
WIDE	2M
OSD-DATE	3M
D-STB	4M
D-DATA	5M
S-DATA	6M
D-CLOCK	7M
CAM-RST	8M
DATE	9M

R0994 680K
R0966 47K
R0740 220K
R0959 1K
R0972 1K
R0974 10K
R0752 47K
R0753 1K
[TYPE 543/545/548]

IC0904 BU6294FV CHARA GEN

R0971 56K
R0996 1K
R0975 1K
R0999 1K
R0944 100K
C0923 0.01
L0902 15u
C0924 33P
C0925 82P
R0729 1K
R0963 3.9K [TYPE 543/545/548] 12K [TYPE 330/340]
Q0912 (BR)
R0987 4.7K
R0986 4.7K
Q0911 (BR)
R0991 1.5K
[TYPE 543/545/548]
[TYPE 330/340]

[TYPE 543/545/548]
R0733 1K

Q0909 (64)
R0928 680K
D0901 (C)
C0910 0.047
R0929 1M
R0930 1M
R0931 1M
R0932 1M
R0933 1M
R0934 1M
R0935 1K
R0927 47K
R0930 47K
R0744 100K
R0995 10K
Q0907 (64)
Q0903 (54)

IC0902 S84233FS BACK-UP DET

L0904 10u
R0908 150K
R0907 10K
R0934 100K
C0901 (ER)
Q0902 (BR)
Q0904 (FR)
R0903 56K
R0905 100K
R0906 47K
R0912 1M
R0913 100K
C0902 47/16
C0904 u
C0908
R0901 100K
C0905 100/6.3
C0906 0.01
C0907 0.01
C0909 1u
R0954 10K
R0957 5.6K

IC0901
CXP87240136R
SYSTEM CONTROL(S)-μP

56	ADDV+SQUELCH	70	V-DET
57	SW30 (SW25)	71	BATT SERIAL
58	LCD-HOLD	72	SSB DATA
59	AUDIO30 (25)	73	SSB CLK
60	D BRAKE		
67	CAM/LINE	47	VCR KEYS2
68	S.EDIT	48	SHT DET
69	TRICK	49	BATTERY
70	OSD RESET	50	GND

R0914 10K
R0915 10K
R0916 10K
R0920 10K
R0921 10K
R0922 10K
R0923 10K
R0924 3.9K
R0925 10K
R0926 10K
R0741 10K

R0964 10K
R0962 1K UNLOAD
R0961 1K LOAD
R0958 4.7K
R0998 10K
R0997 3.9K
[TYPE 543/545/548]

R0981 18K
R0980 18K
R0983 33K
R0982 33K
C0919 0.01
C0914 0.01
R0949 10K (1%)
R0955 10K (1%)
C0916 0.01
C0915 0.01
C0917 0.01

R0984 470
R0978 1K
R0985 470
C0918 0.01
R0979 1K
C0942 100/6.3
L0908 47u

Q0905 ★(BR)
R0976 4.7K
R0977 33

R0951 47K
R0953 47K
R0952 10K
R0950 10K

C0911 5P
C0912 5P
X0901 11.8MHz
C0913 0.01
R0941 47K
R0942 1K
R0943 1K
R0945 1K
R0947 47K
R0948 4.7K
R0946 47K

C0999 0.01
L0906 22u
C0939 47/6.3
R0702 39K
IC0907 GP1U101X IR RECEIVER

R0992 1K
D0902 (C)
0900
BATTERY HOLDER (BACK UP)

R0705 1K
R0707 1K
R0708 820

To SERVO 1L-25L [P6-12]

GND (M)	18L
HSW	4L
HSW	2L
D.STBY	12L
D.BRAKE	13L
C.REV	11L
D.REV	14L
VCO.CONT	19L
C.SPEED	7L
D.SPEED	8L
UNLOAD	6L
LOAD	5L
CFG	9L
DFG	17L
DPG	16L
VCO.IN	20L
PB.ENVL	22L
TRK.ADJ	15L
PB.PILOT	24L
TRK.MOD	23L
f4.SEL	25L
C.STBY	10L
T.PROG	3L
VCR.ON	21L
S3V	1L

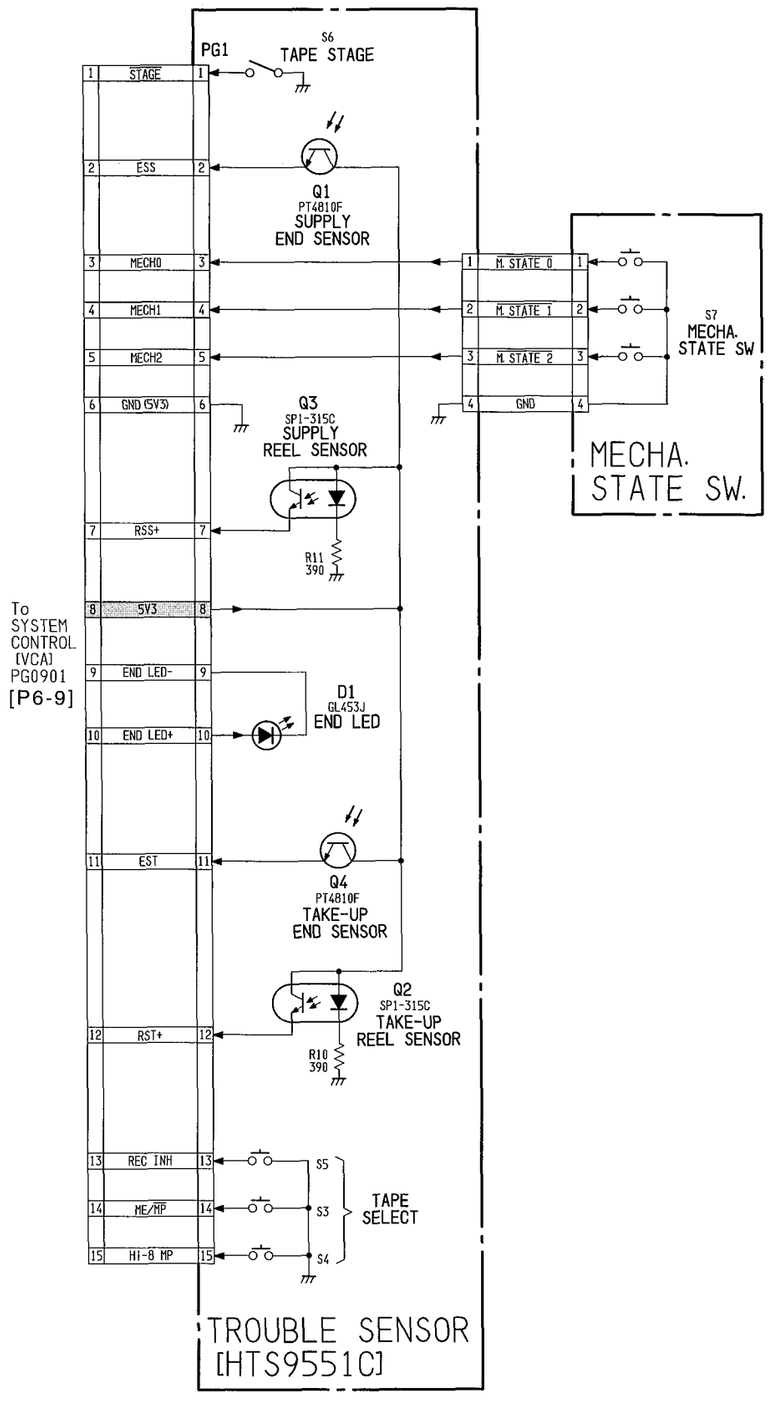
To TROUBLE SENSOR [HTS9551C] PG1 [P6-10]

PG0901

1	STAGE
2	ESS
3	MECH0
4	MECH1
5	MECH2
6	GND (5V-3)
7	RSS+
8	5V3
9	END_LED-
10	END_LED+
11	EST
12	RST+
13	REC_INH
14	ME/MP
15	Hi8MP

SYSTEM CONTROL[VCA]

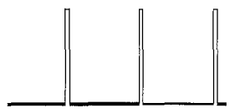
TROUBLE SENSOR [HTS9551C] SCHEMATIC DIAGRAM



SYS. CON WAVEFORMS

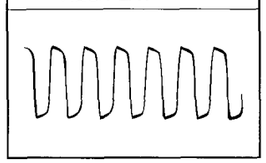
1-A IC901-41 2.8Vp-p
1V/100nsec.cm
REC/PLAY

2-A IC901-64 4.9Vp-p
1V/20 0µsec.cm
REC/PLAY

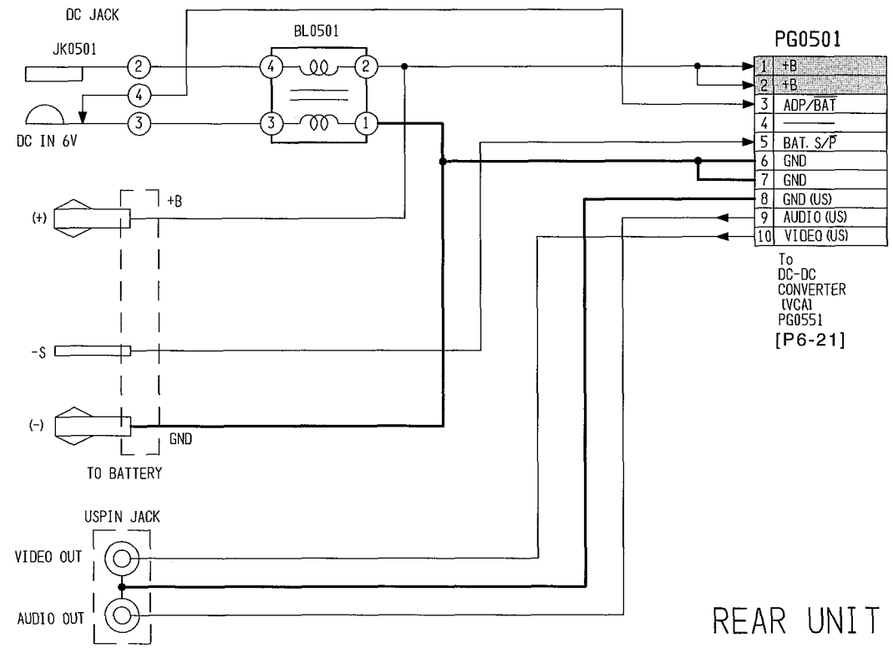


3-A IC901-68 3.2Vp-p
1V/500µsec.cm
REC/PLAY

4-A IC901-85 3 4Vp-p
1V/20.0µsec.cm
REC/PLAY



REAR UNIT SCHEMATIC DIAGRAM

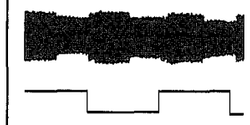


REAR UNIT

SERVO [VCA] SCHEMATIC DIAGRAM

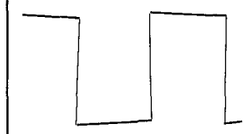
SERVO WAVEFORMS

1-A IC601-14 200mVp-p
0.1V/5.0msec.cm
PLAY

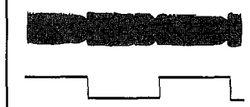


2-A IC601-21 560mVp-p
0.2V/5.0msec.cm
REC

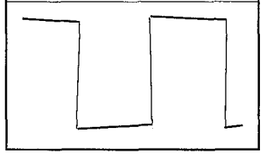
3-A PG601-3 3.3Vp-p
1V/5.0msec.cm
REC/PLAY



4-A PG601-5 150mVp-p
0.1V/5.0msec.cm
PLAY



5-A PG601-7 2.4Vp-p
0.5V/5.0msec.cm
REC/PLAY



ADJUSTMENT TERMNAL

To LOADNG MOTOR

To CAPSTAN MOTOR

To CYL MOTOR

S3V 1L
HSW 2L
ENVL 3D
T.PROG 3L
HSW 4L
+B (VTR) 2K
LOAD 5L
UNLOAD 6L
5V3 1K
C.CONT 5K
C.SPEED 7L
D.CONT 3K
D.SPEED 8L
CFG 9L
C.STBY 10L
C.VS 6K
C.REV 11L
D.STBY 12L
D.BRAKE 13L
D.REV 14L
D.VS 4K
3V1 8K
TRK.ADJ 15L
DPG 16L
DFG 17L
GND (5V3) 9K
GND (M) 7K
GND (M) 18L
VCO.CONT 19L
VCO.IN 20L
PB.SIG 1D
VCR.ON 21L
PB.ENVL 22L
TRK.MOD 23L
RE.PILOT 2D
PB.PILOT 24L
f4.SEL 25L

To SYSTEM CONTROL 1L-25L [P6-9]

To DC-DC CONVERTER 1K-9K [P6-22]

To Y/CHROMA 1D-3D [P6-18]

IC0671 BA6417F L MOTOR DRIVE

IC0631 LB1950V-TLM CYL MOTOR DRIVE

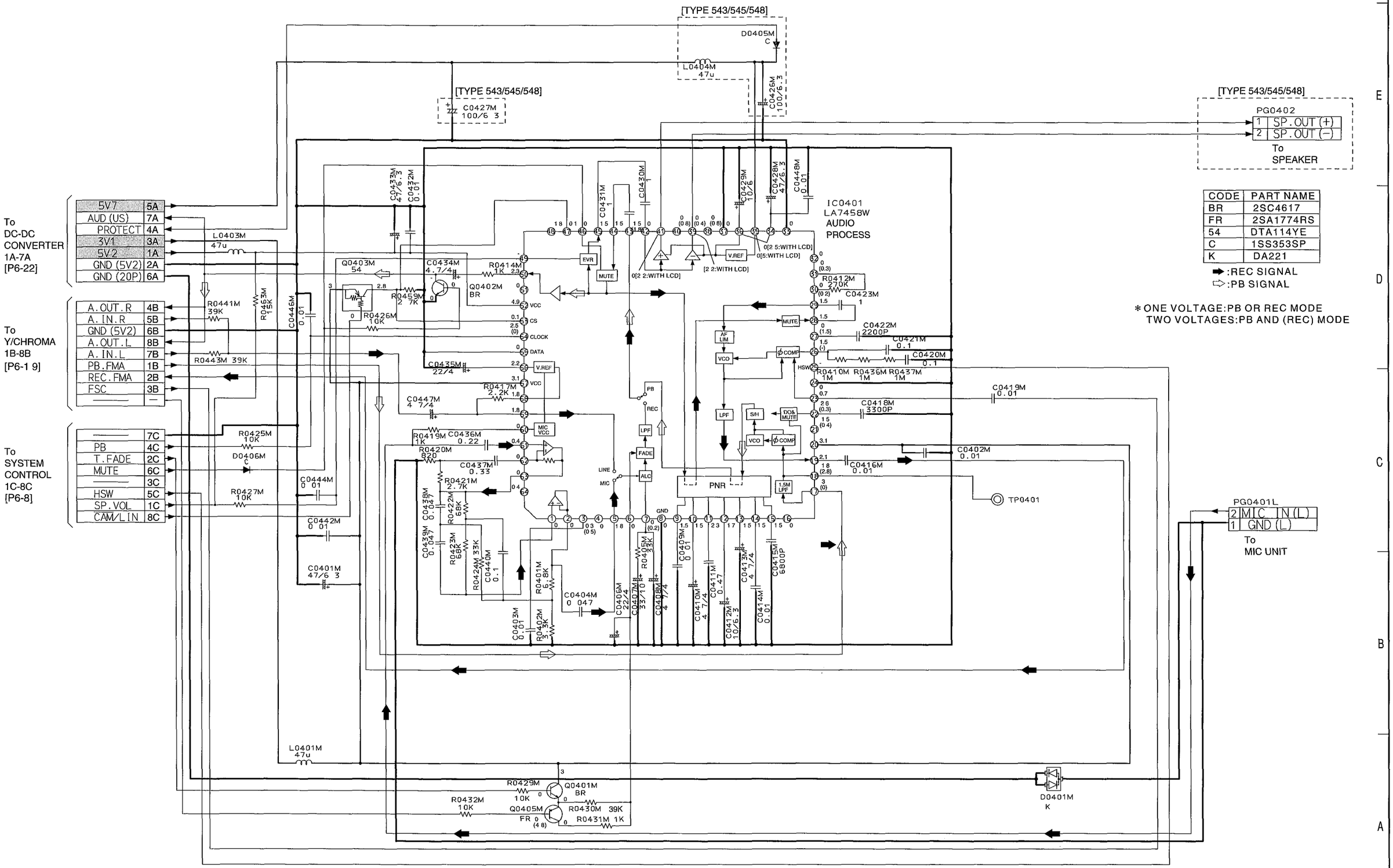
[C0501 UPC5023GS-122-E1 ATF

CODE	PART NAME
BR	2SC4617
54	DTA114YE
C	1SS353SP

※ONE VOLTAGE:PB OR REC MODE
TWO VOLTAGES:PB AND (REC) MODE
◯— :WAVEFORMS No

SERVO [VCA]

AUDIO [VCA] SCHEMATIC DIAGRAM

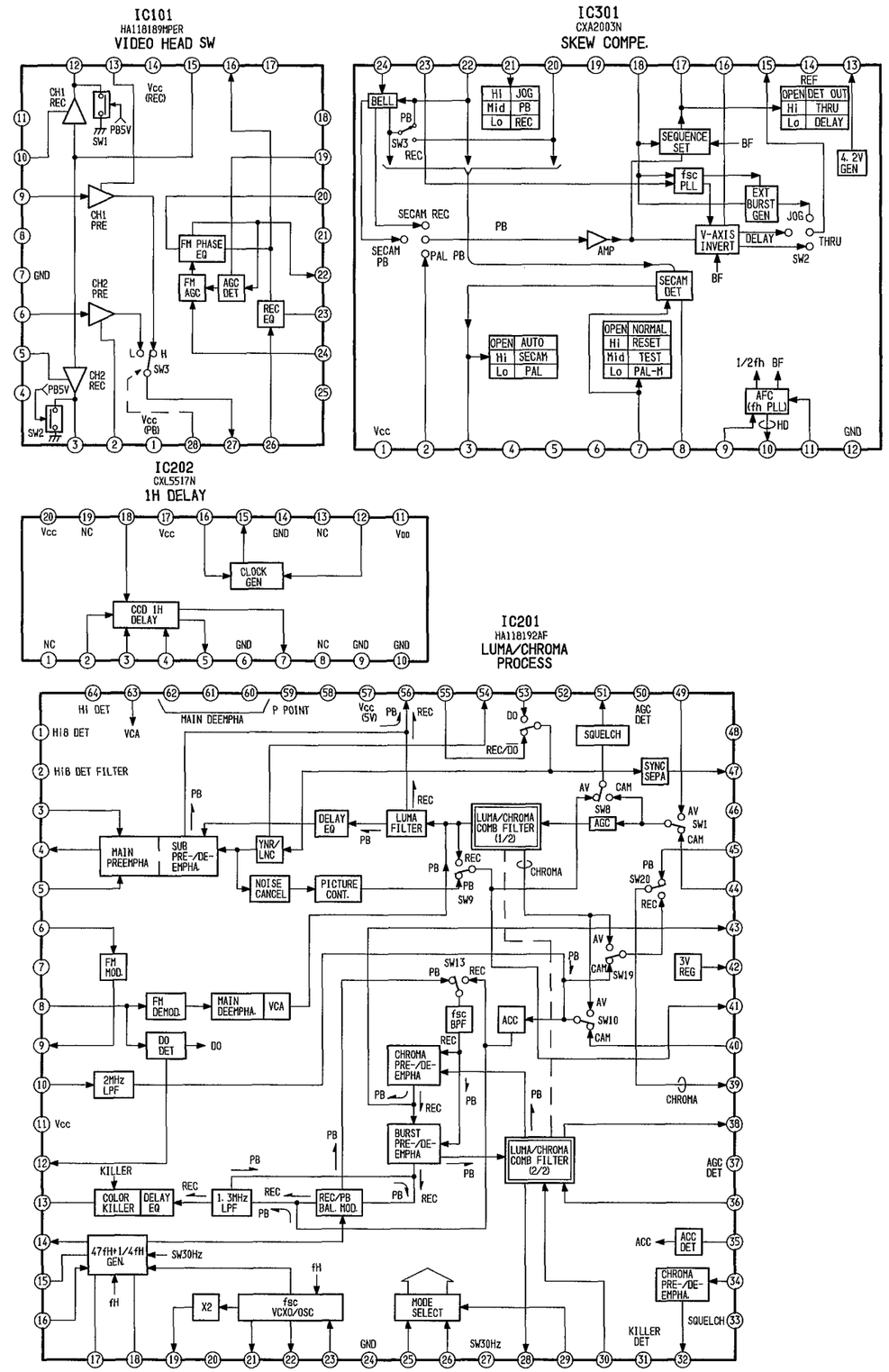


AUDIO [VCA]

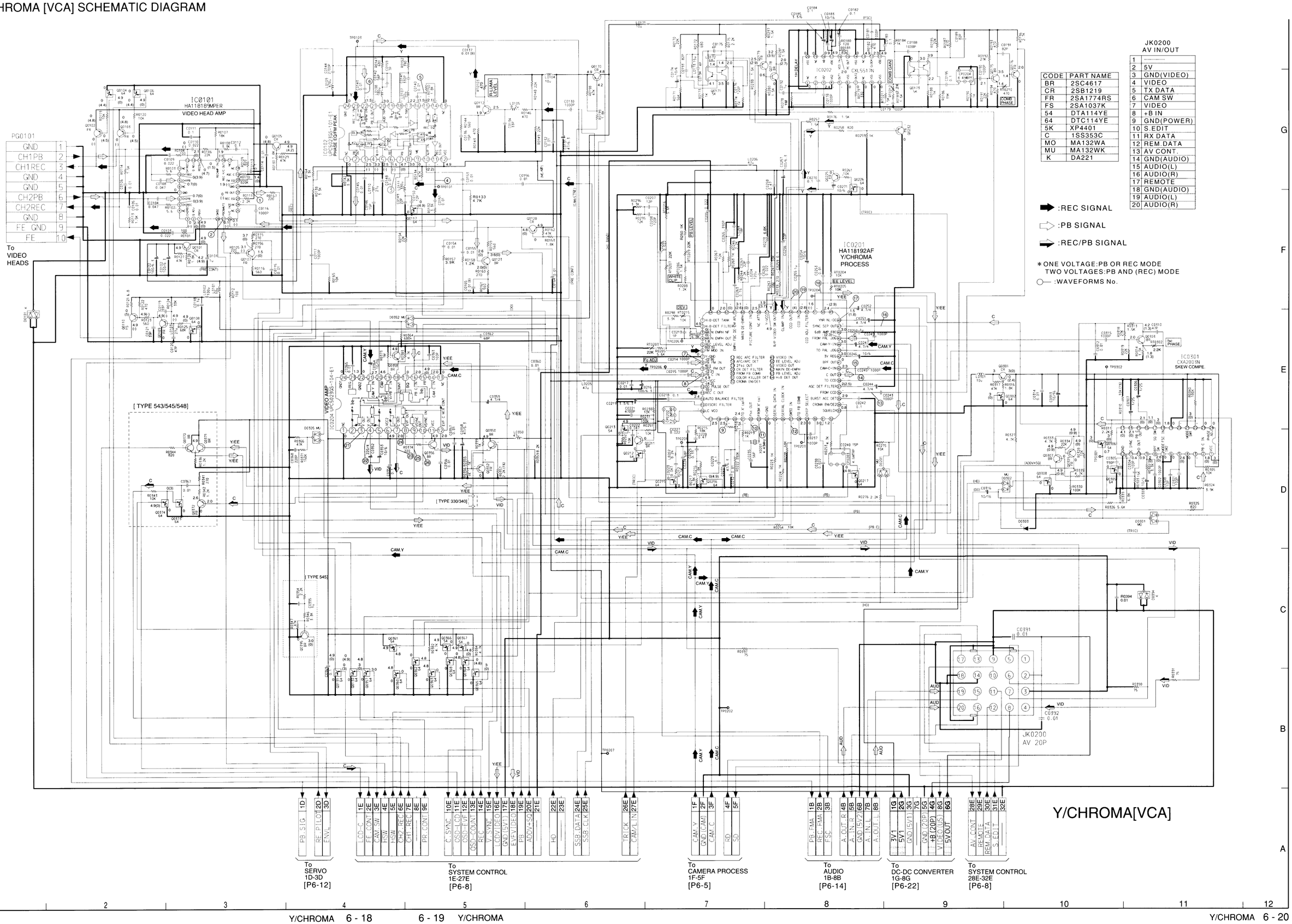
VIDEO WAVEFORMS

1-B IC101-22 300mVp-p 0.2V/5.0msec.cm PLAY	8-B IC201-10 310mVp-p 0.2V/5.0msec.cm PLAY	15-A IC201-39 610mVp-p 0.2V/20.0µsec.cm REC/PLAY	21-A IC204-3 2 0Vp-p 0.5V/20.0µsec.cm REC
2-B IC101-27 200mVp-p 0.1V/5.0msec cm PLAY	9-A IC201-19 400mVp-p 0.2V/20.0µsec.cm REC/PLAY	16-A IC201-47 4.8Vp-p 1V/20.0µsec.cm REC/PLAY	21-B IC204-3 2 2Vp-p 0.5V/20.0µsec.cm PLAY
3-A IC102-6 380mVp-p 0 1V/20.0µsec.cm REC	10-A IC201-22 400mVp-p 0.2V/20.0µsec.cm REC/PLAY	17-A IC201-49 1.0Vp-p 0.2V/20.0µsec cm REC	22-A IC204-4 2.0Vp-p 0.5V/20.0µsec.cm REC/PLAY
4-A IC102-11 520mVp-p 0.2V/20 0µsec.cm REC	11-A IC201-23 750mVp-p 0.2V/200nsec.cm REC/PLAY	18-A IC201-51 1.1Vp-p 0.2V/20.0µsec cm REC	23-B IC204-7 1 2Vp-p 0 5V/20.0µsec.cm PLAY
5-A IC102-15 700mVp-p 0.2V/20.0µsec.cm REC	12-A IC201-27 3.0Vp-p 1V/5.0msec.cm REC/PLAY	18-B IC201-51 1.2Vp-p 0 2V/20.0µsec.cm PLAY	24-A IC204-8 2 1Vp-p 0.5V/20.0µsec.cm REC/PLAY
6-B IC102-22 340mVp-p 0.2V/5 0msec cm PLAY	13-A IC201-36 110mVp-p 50mV/20.0µsec.cm REC/PLAY	19-A IC201-53 350mVp-p 0.1V/20.0µsec cm REC/PLAY	25-A IC204-9 4.6Vp-p 1V/5.0msec cm REC/PLAY
7-B IC201-8 560mVp-p 0.2V/5 0msec cm PLAY	14-A IC201-38 200mVp-p 50mV/20.0µsec.cm REC/PLAY	20-A IC201-54 490mVp-p 0.1V/20.0µsec.cm REC/PLAY	26-A IC204-10 2.5Vp-p 1V/5 0msec.cm REC/PLAY

IC BLOCK DIAGRAMS



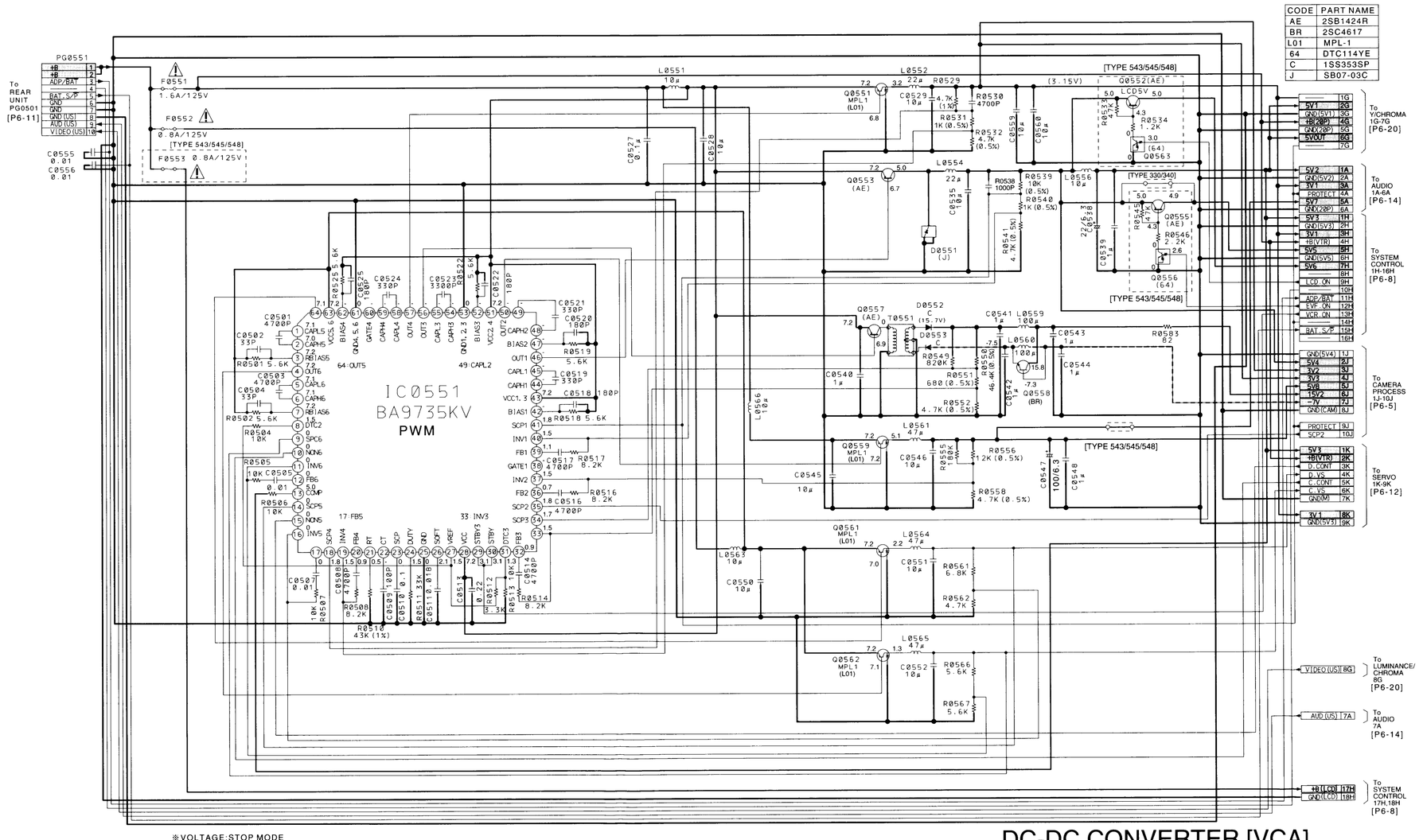
Y/CHROMA [VCA] SCHEMATIC DIAGRAM



CODE	PART NAME
BR	2SC4617
CR	2SB1219
FR	2SA1774RS
FS	2SA1037K
54	DTA114YE
64	DTC114YE
5K	XP4401
C	1SS353C
MO	MA132WA
MU	MA132WK
K	DA221

JK0200
AV IN/OUT

1	——
2	5V
3	GND(VIDEO)
4	VIDEO
5	TX DATA
6	CAM SW
7	VIDEO
8	+B IN
9	GND(POWER)
10	S.EDIT
11	RX DATA
12	REM.DATA
13	AV CONT.
14	GND(AUDIO)
15	AUDIO(L)
16	AUDIO(R)
17	REMOTE
18	GND(AUDIO)
19	AUDIO(L)
20	AUDIO(R)

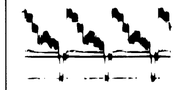


CODE	PART NAME
AE	2SB1424R
BR	2SC4617
L01	MPL-1
64	DTC114YE
C	1SS353SP
J	SB07-03C

DC-DC CONVERTER [VCA]

LCD DRIVE WAVEFORMS

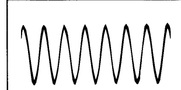
1-A IC5301-3 510mVp-p 0.1V/20.0µsec.cm COLOR CHART



1-B IC5301-3 500mVp-p 0.1V/20.0µsec.cm VIDEO IN

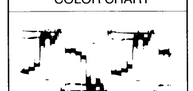
2-A IC5301-5 300mVp-p 0.1V/20.0µsec.cm COLOR CHART

3-A IC5301-14 450mVp-p 0.1V/200nsec.cm COLOR CHART

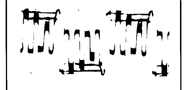


4-A IC5301-20 5.4Vp-p 1V/20.0µsec.cm COLOR CHART

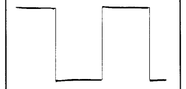
5-A IC5301-22 5.4Vp-p 1V/20.0µsec.cm COLOR CHART



6-A IC5301-24 5.4Vp-p 1V/20.0µsec.cm COLOR CHART

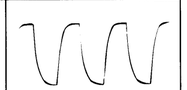


7-A IC5301-29 4.8Vp-p 1V/20.0µsec.cm COLOR CHART

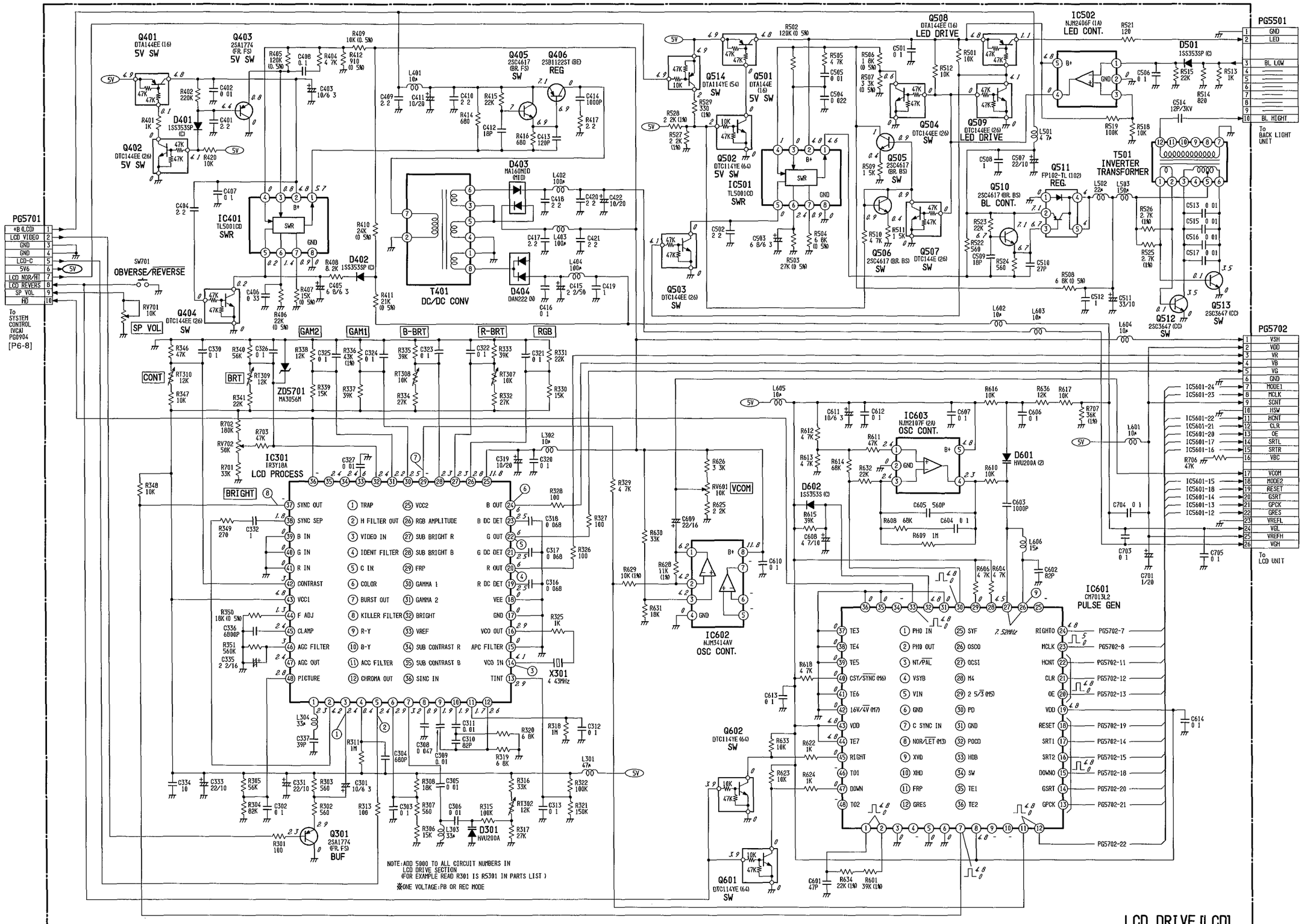


8-A IC5301-37 4.7Vp-p 1V/20.0µsec.cm COLOR CHART

9-A IC5601-26 5.3Vp-p 1V/20.0µsec.cm COLOR CHART

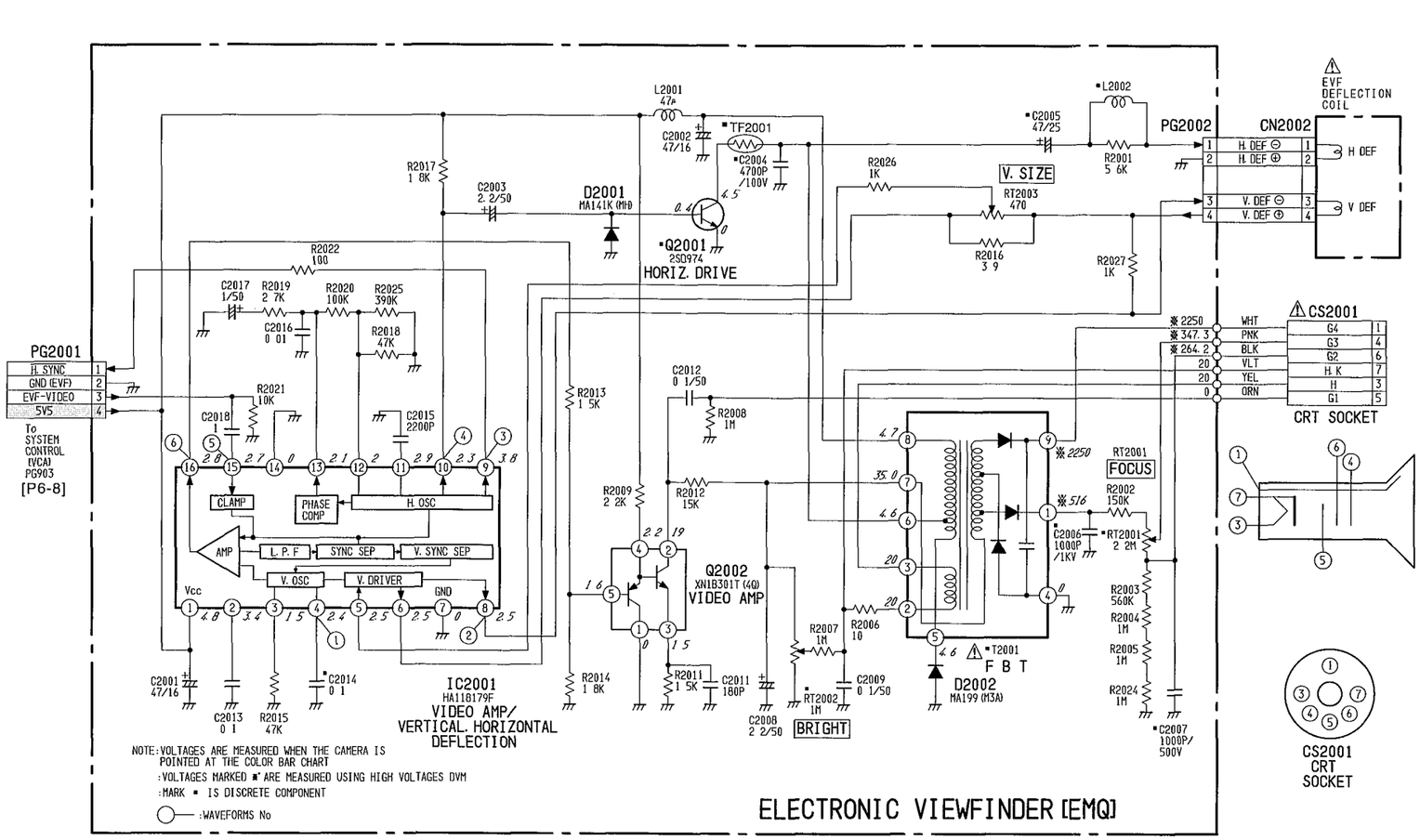


LCD DRIVE [LCD] SCHEMATIC DIAGRAM



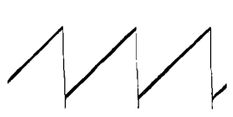
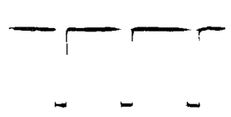
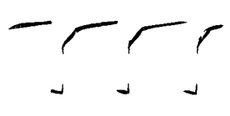
LCD DRIVE 6 - 24 6 - 25 LCD DRIVE

ELECTRONIC VIEWFINDER [EMQ] SCHEMATIC DIAGRAM



ELECTRONIC VIEWFINDER [EMQ]

ELECTRONIC VIEWFINDER WAVEFORMS

1-A IC2001-4 870mVp-p 0 2V/5.0msec cm COLOR CHART	2-A IC2001-8 2 2Vp-p 0 5V/5 0msec cm COLOR CHART	3-A IC2001-9 1 9Vp-p 0 5V/20 0μsec cm COLOR CHART
		
4-A IC2001-10 1 7Vp-p 0 5V/20 0μsec.cm COLOR CHART	5-A IC2001-15 1 0Vp-p 0.2V/20.0μsec.cm COLOR CHART	6-A IC2001-16 2.9Vp-p 1V/20.0μsec.cm COLOR CHART
		

IDENTIFICATION OF PARTS LOCATION

EMQ

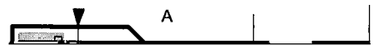
Symbol No	Parts Location
C	
C2001	B-1B
C2002	B-2A
C2003	B-2A
C2004	A-2B
C2005	A-1A
C2006	A-2A
C2007	A-2A
C2008	B-2A
C2009	A-1A
C2011	A-2A
C2012	A-2B
C2013	A-4B
C2014	A-4B
C2015	A-3A
C2016	A-3A
C2017	B-1A
C2018	B-1A
D	
D2001	B-3A
D2002	A-1A
IC	
IC2001	A-4A
L	
L2001	B-3A
L2002	A-1B
PG	
PG2001	A-3B
PG2002	A-4A
Q	
Q2001	A-2B
Q2002	A-3A
R	
R2001	A-1B
R2002	A-2A
R2003	A-2A
R2004	A-2A
R2005	A-2A
R2006	A-1A
R2007	A-1A
R2008	A-2B
R2009	A-3B
R2011	A-2A
R2012	A-2B
R2013	A-3A
R2014	A-3A
R2015	A-4B
R2016	B-1A
R2017	A-3B
R2018	A-3A
R2019	A-3A
R2020	A-3A
R2021	B-1A
R2022	A-4A
R2024	A-2A
R2025	A-3A
R2026	B-1A
R2027	B-1A

Symbol No	Parts Location
RT	
RT2001	A-2A
RT2002	A-3A
RT2003	B-1A
T	
T2001	A-1A
TF	
TF2001	B-2A

SE

Symbol No	Parts Location
C	
C1002	A-4B
C1003	B-4B
C1004	B-4C
C1005	A-5B
C1006	B-4B
C1007	B-5B
C1008	B-4B
C1009	B-4B
C1010	B-4B
C1403	B-3A
C1404	B-2A
C1405	A-2A
C1406	A-2A
C1407	B-3A
C1408	B-2A
C1409	B-3B
C1410	B-2A
C1411	A-2A
C1412	A-1A
C1413	B-4A
C1414	B-3B
C1415	B-3A
C1417	A-4B
C1418	B-3B
D	
D1002	B-4B
IC	
IC1001	B-5A
IC1401	B-3A
IC1402	B-2A
IC1403	B-4A
IC1404	B-3B
PG	
PG1001	A-4B
Q	
Q1001	B-5A
Q1401	B-3C
R	
R1001	B-4A
R1002	B-4B
R1003	B-4C
R1006	B-4B
R1009	B-4B
R1403	B-3A
R1404	B-2A
R1405	B-3A
R1406	B-2A
R1407	B-4B
R1408	B-3B
R1409	B-4B
R1410	B-3B
R1411	B-4A
R1412	B-3B
R1413	B-4A
R1414	B-4B
R1416	B-3B
R1417	B-3B

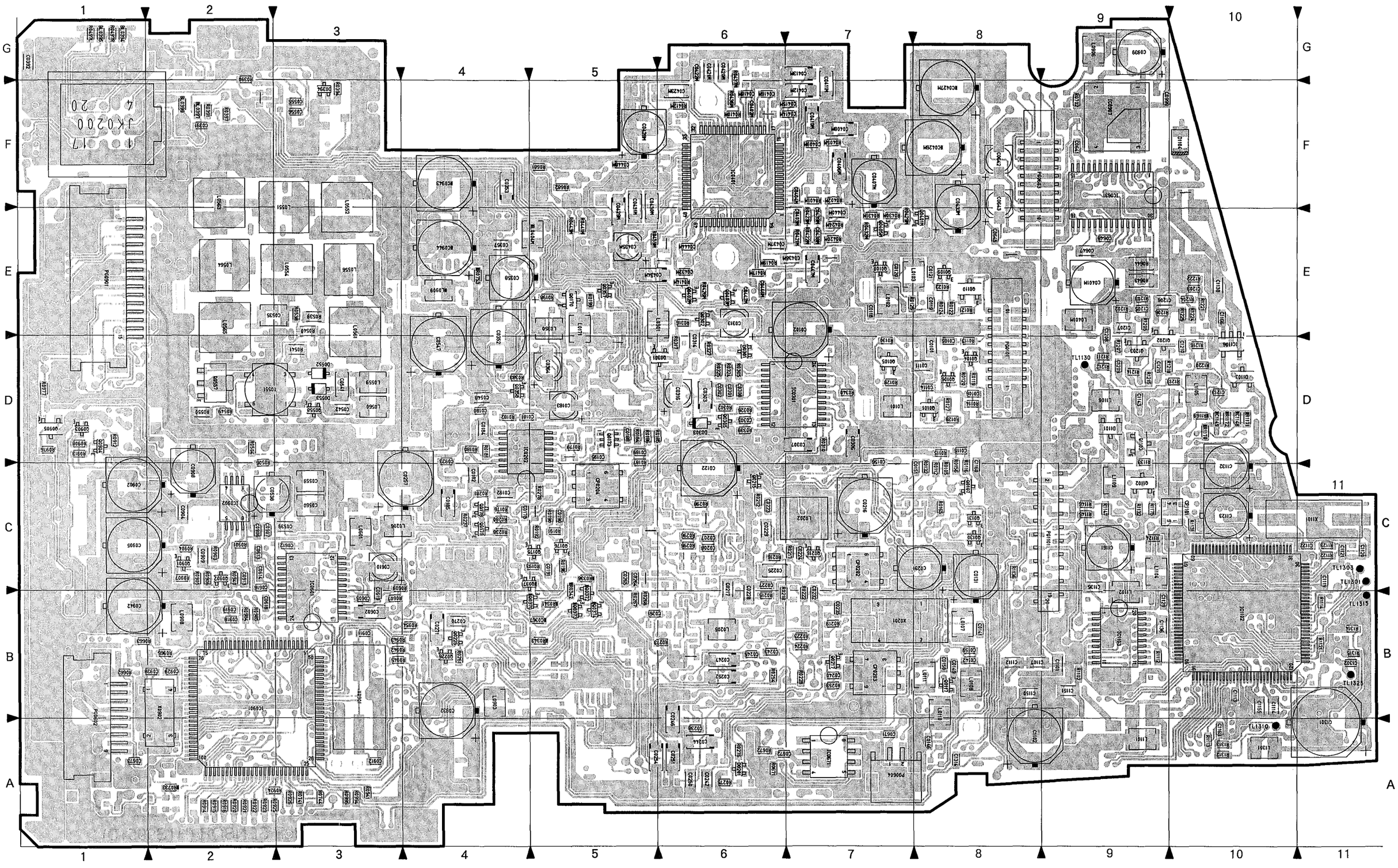
SE, EMQ, HTS9551C CIRCUIT BOARDS



DIFFERENCE TABLE

VCA [MAIN] CIRCUIT BOARD – SIDE A –

[PATTERN No. JA1536-2]



DIFFERENCE TABLE

NOTE: This table listes the different components marked with asterisks (*) in the circuit board diagrams.

-SIDE A-

SYMBOL No.	TYPE 330/340	TYPE 543/548	TYPE 545
C0367	×	○	○
C0943	×	○	○
C0944	×	○	○
C1148	×	×	○
C1149	×	×	○
C0426M	×	○	○
C0427M	×	○	○
L0909	×	○	○
L0404M	×	○	○
Q0370	×	○	○
Q0371	×	○	○
Q0372	×	○	○
Q0373	×	○	○
Q0374	×	○	○
R0336	×	○	○
R0341	×	○	○
R0342	×	○	○
R0343	×	○	○
R0733	×	○	○
R0753	×	○	○
R1169	×	×	○
R1170	×	×	○
R1171	JUMPER	JUMPER	×
R1172	JUMPER	JUMPER	×

IDENTIFICATION OF PARTS LOCATION

VCA 1/2

Symbol No	Parts Location
#	
#0900	B-7F
BL	
BL0394	A-1G
BL0395	A-1G
BL0397	A-2F
BL0399	A-2F
BL0401	B-10F
BL0402	B-9F
C	
C0101	A-8D
C0102	A-7E
C0103	B-8E
C0104	B-8E
C0105	A-8D
C0106	A-8D
C0108	B-8D
C0109	B-8D
C0110	B-8D
C0111	A-8D
C0112	B-8D
C0113	B-8D
C0114	A-8D
C0115	A-8D
C0116	B-7E
C0117	B-8C
C0118	A-7E
C0119	A-8E
C0120	A-7E
C0121	A-8E
C0122	A-6C
C0130	B-8A
C0131	A-8C
C0132	B-7C
C0134	B-7A
C0136	B-7A
C0137	B-7B
C0140	B-8B
C0141	A-8B
C0142	A-8B
C0143	B-8C
C0144	B-8C
C0145	B-7B
C0146	A-8A
C0148	B-7B
C0149	A-8B
C0150	A-8B
C0151	A-8C
C0153	B-7C
C0154	B-7C
C0155	B-7C
C0156	A-7D
C0159	A-8B
C0164	B-7D
C0165	B-8C
C0174	B-5C
C0175	B-5B
C0176	B-5B
C0178	A-4C
C0179	B-5D
C0180	A-4D
C0181	A-4D
C0182	A-4C
C0183	A-5D
C0184	A-4D
C0185	A-4C
C0188	A-5D
C0189	A-5D
C0190	A-5C
C0191	A-5C
C0192	A-4C
C0193	B-5C
C0194	B-5C
C0195	A-5D
C0205	B-6B
C0206	B-5C
C0207	A-6C
C0208	A-6C
C0213	B-6C
C0214	B-6C
C0215	B-6C
C0216	A-7C
C0217	A-6C
C0218	B-7C
C0219	B-7B
C0221	B-7C
C0222	B-7C
C0223	A-6C
C0224	A-7C
C0225	A-6C
C0227	A-6C
C0228	A-6B
C0229	A-6C
C0231	A-8C
C0232	A-7B
C0235	A-7B
C0237	B-7B
C0238	A-6A
C0240	A-7B
C0242	A-6A
C0243	A-6B
C0244	A-6A
C0245	A-6B
C0246	A-6A
C0247	A-6B
C0249	B-6B
C0250	A-6A
C0251	A-6A
C0252	A-6B
C0253	B-5B
C0254	A-5A
C0255	B-5B
C0256	B-6B
C0257	A-4C
C0258	B-4C
C0259	B-6B
C0260	B-6B
C0261	A-5B
C0263	B-5B
C0264	A-5C
C0265	A-5C
C0270	A-4B
C0271	A-4B
C0301	A-6D
C0302	A-6D
C0303	A-6D
C0304	B-6D
C0305	A-6D
C0306	A-7D
C0307	A-7D
C0308	A-6D
C0310	B-7D
C0312	B-6D
C0313	A-6E
C0314	A-6D
C0315	B-6D
C0316	A-6D
C0352	A-4E
C0353	A-4F
C0354	B-4D
C0356	B-4E
C0357	A-4E
C0358	A-4E
C0359	B-5D
C0360	B-5E
C0362	B-5D
C0363	B-5D
C0364	A-5D
C0365	B-5D
C0367	A-5B
C0368	B-5E
C0369	B-5D
C0391	A-2F
C0392	A-1G
C0395	B-5E
C0401M	A-9E
C0402M	A-6F
C0403M	A-7E
C0404M	A-7F
C0406M	A-7F
C0407M	A-7F
C0408M	A-7F
C0409M	A-7F
C0410M	A-7F
C0411M	A-7F
C0412M	A-7F
C0413M	A-7G
C0414M	A-7F
C0415M	A-7F
C0416M	A-6F
C0418M	A-6F
C0419M	B-6E
C0420M	A-6G
C0421M	A-6G
C0422M	A-6G
C0423M	A-6F
C0426M	A-8F
C0427M	A-8F
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C0429M	A-5E
C0430M	A-5E
C0431M	A-5E
C0432M	A-6E
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C0434M	A-5E
C0435M	A-5E
C0436M	A-7E
C0437M	A-6E
C0438M	A-7E
C0439M	A-7E
C0440M	A-7E
C0442M	A-6E
C0444M	A-6E
C0446M	A-6E
C0447M	A-7E
C0448M	A-5F
C0501	B-3C
C0502	B-3C
C0503	B-3C
C0504	B-3C
C0505	B-2C
C0507	B-2C
C0508	B-2C
C0509	B-2C
C0510	B-2D
C0511	B-2D
C0513	B-2D
C0514	B-2D
C0516	B-2D
C0517	B-2D
C0518	B-3D
C0519	B-3D
C0520	B-3D
C0521	B-3D
C0522	B-3D
C0523	B-3D
C0524	B-3C
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C0528	B-2F
C0529	B-3E
C0535	A-2E
C0538	A-2C
C0539	A-3C
C0540	B-2D
C0541	A-3D
C0542	A-3D
C0543	B-4D
C0544	B-3D
C0545	B-3E
C0546	B-3D
C0547	A-4D
C0548	A-4D
C0550	B-2E
C0551	B-2E
C0552	B-2E
C0555	A-3F
C0556	A-3F
C0559	A-3C
C0560	A-3C
C0601	B-3B
C0602	A-3B
C0603	B-3B
C0604	B-3B
C0605	A-3B
C0606	B-3C
C0607	B-3C
C0608	B-3C
C0609	B-3C
C0610	A-3C
C0611	B-3C
C0612	A-3C
C0613	A-2C
C0614	A-2C
C0615	B-3C
C0616	A-2C
C0617	B-2B
C0618	A-2B
C0619	A-2C
C0622	B-2B
C0635	B-9F
C0636	B-9F
C0637	B-9F
C0638	B-9F
C0641	A-9F
C0642	A-8F
C0643	A-8F
C0645	A-8E
C0647	A-9E
C0648	A-9E
C0649	B-9E
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C0651	B-9E
C0652	B-9E
C0671	A-7A
C0672	A-6A
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C0691	B-2B
C0692	B-2B
C0693	B-1B
C0694	B-2B
C0695	B-2B
C0696	B-1B
C0902	A-1C
C0904	A-2C
C0905	A-1C
C0906	A-2C
C0907	A-2C
C0908	A-2C
C0909	A-2C
C0910	B-2A
C0911	A-3B
C0912	A-3A
C0913	A-2C
C0914	B-3B
C0915	B-3B
C0916	B-3B
C0917	B-3B
C0918	A-2B
C0919	A-2B
C0923	A-4D
C0924	B-4C
C0925	B-4C
C0928	A-2B
C0929	A-2B
C0930	B-2A
C0932	A-4B
C0939	A-9G
C0942	A-1B
C0943	A-4F
C0944	A-4E
C0999	A-9F
C1101	A-9B
C1102	A-8A
C1103	B-8B
C1104	B-8B
C1105	B-8B
C1106	B-9B
C1107	A-8B
C1108	B-9B
C1109	B-9B
C1110	B-8A
C1112	A-8B
C1113	A-10B
C1114	A-10B
C1115	B-10B
C1116	B-10B
C1117	B-10B
C1118	B-10B
C1119	A-11C
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C1122	A-11C
C1123	A-10C
C1125	B-10C
C1126	B-10C
C1127	B-10C
C1128	B-10C
C1129	A-9B
C1130	A-10E
C1131	B-11C
C1132	A-10C
C1135	A-9C
C1136	A-9B
C1137	B-10E
C1139	B-10C
C1141	B-9B
C1142	B-9C
C1143	A-9D
C1144	B-10D
C1145	B-10D
C1146	B-10D
C1147	B-10D
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C1149	A-10D
C1150	A-8B
C1151	A-9B
C1155	A-10B
C1156	B-9E
C1159	B-11C
C1160	A-8C
C1161	A-9C
C1163	A-10A
C1166	A-10E
C1167	B-10C
C1169	B-9C
C1172	B-10B
C1201	B-10E
C1202	B-9E
C1203	A-10E
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C1302	A-11B
C1303	B-11B
C1304	B-11B
C1305	B-10D
C1311	B-11B
C1314	A-8A
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CP0202	A-7C
CP0203	A-7B
CP0204	A-5C
CP1101	A-10C
D	
D0101	B-6E
D0201	A-6A
D0301	A-6D
D0302	B-6D
D0303	A-6D
D0305	B-5E
D0352	B-5D
D0394	A-3F
D0401M	B-8F
D0405M	B-5E
D0406M	B-6E
D0551	B-3E
D0552	A-3D
D0553	A-3D
D0601	B-2A
D0901	B-2A
D0902	B-6E
D1101	A-9D
D1103	A-10D
D1104	A-10F
D1301	B-10D
F	
F0551	B-2F
F0552	B-2E
F0553	B-2F
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IC0201	B-7B
IC0202	A-4D
IC0204	B-4D
IC0301	A-7D
IC0401	A-6F
IC0551	B-2D
IC0601	A-3C
IC0631	A-9F
IC0671	A-7A
IC0901	A-2B
IC0902	A-2C
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IC1103	A-9B
IC1104	B-9C
IC1105	B-9B
IC1106	A-10D
IC1201	B-9E
IC1301	B-11B
JK	
JK0200	A-1F
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L0105	B-7A
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L0108	A-8B
L0109	B-8C
L0110	A-8B
L0111	A-8B
L0171	A-5E
L0172	B-5C
L0173	B-5C
L0202	A-7C
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L0205	A-6B
L0206	A-3C
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L0350	A-5E
L0401M	A-9E
L0403M	B-7E
L0404M	A-5E
L0551	A-3F
L0552	A-3F
L0554	A-3E
L0556	A-3E
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L0563	A-2F
L0564	A-2E
L0565	A-2E
L0566	B-3E
L0601	A-3C
L0902	B-4C
L0903	A-4B
L0904	B-1D
L0906	A-9G
L0908	A-2B
L0909	A-4E
L1101	A-9A
L1102	A-9B
L1103	B-10C
L1104	A-9C
L1105	A-10D
L1106	A-9D
L1109	A-9C
L1301	A-10A
PG	
PG0101	A-8D
PG0401L	B-8F
PG0402	B-9F
PG0551	B-3F
PG0601	B-5F
PG0602	A-1A
PG0603	A-8F
PG0604	A-7A
PG0901	A-1E
PG0902	B-6A
PG0903	B-6A
PG0904	B-4F
PG0905	B-9F
PG1101	A-9C
PG1103	B-1B
PG1301	B-10B
Q	
Q0101	A-8D
Q0102	B-8D
Q0103	B-8E
Q0104	A-8D
Q0105	A-7D
Q0106	A-8D
Q0107	A-8C
Q0108	A-7E
Q0109	A-8E
Q0110	A-8E
Q0112	B-7A
Q0117	A-8B
Q0120	B-6D
Q0123	B-8C
Q0130	A-8C
Q0131	A-8C
Q0170	A-5E
Q0171	B-5C
Q0173	A-5D
Q0175	A-5C
Q0176	A-5C
Q0178	A-4C
Q0179	A-4C
Q0211	B-6C
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Q0217	A-7B
Q0225	A-4B
Q0226	A-4B
Q0232	B-4C
Q0301	A-6D
Q0302	A-6E
Q0303	B-7D
Q0305	A-6D
Q0306	B-6D
Q0307	B-6D
Q0308	B-6D
Q0309	B-6D
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Q0356	B-4E
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Q0358	A-4D
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Q0368	B-5D
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Q0372	A-5B
Q0373	A-5B
Q0374	A-5B
Q0395	B-5E
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Q0602	B-3C
Q0603	B-3C
Q0604	B-2C
Q0901	A-2C
Q0902	A-2C
Q0903	A-1D
Q0904	A-1D
Q0905	A-1D
Q0907	B-3A
Q0909	B-3A
Q0911	B-5B
Q0912	B-5B
Q1101	B-10C
Q1102	A-9C
Q1103	A-9D
Q1108	B-9D
Q1201	B-10E
Q1202	A-9D
Q1203	A-9D
R	
R0101	B-8E
R0102	B-8E
R0103	B-8D
R0104	B-8D
R0105	A-8C
R0106	B-8D
R0107	B-8D
R0108	B-8D
R0109	B-8D
R0110	B-7D
R0111	B-7E
R0112	A-8C
R0113	A-8D
R0114	A-8D
R0115	A-8D
R0116	A-8C
R0119	A-8D
R0120	A-8D
R0121	A-8E
R0122	A-8E
R0123	A-8E
R0124	A-8E
R0125	A-7E
R0127	A-8D
R0128	A-8D
R0129	A-7D
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R0191	A-5C
R0192	A-5C
R0193	A-5C
R0194	B-4C
R0196	A-5C
R0198	A-5E
R0199	A-5E
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R0205	B-6C
R0208	B-5B
R0212	A-6C
R0215	A-6B
R0216	A-6C
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R0218	A-6B
R0219	A-7B
R0222	A-7B
R0223	A-7B
R0224	A-7B
R0228	A-7B
R0230	B-7C
R0231	B-7C
R0237	A-4C
R0238	A-4C
R0239	B-6B
R0240	B-6B
R0241	B-6B
R0244	B-5B
R0246	B-5B
R0250	B-6B
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R0254	A-6B
R0257	B-4B
R0258	B-4B
R0259	B-4B
R0261	A-4B
R0267	A-5B
R0268	A-5B
R0273	A-6B
R0275	A-6A
R0276	A-6A
R0278	A-5C
R0280	A-4C
R0281	A-4C
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R0305	A-6D
R0310	A-7D
R0311	B-6E
R0313	B-6D
R0314	B-6D
R0316	A-6E
R0317	A-6D
R0318	B-6D
R0319	B-6D
R0324	A-6D
R0325	A-6D
R0326	A-6D
R0327	A-6D
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R0330	B-6D
R0333	B-6D
R0334	B-6D
R0335	B-6D
R0336	A-5C
R0337	B-4E
R0339	A-6D
R0340	A-7D
R0341	A-5B
R0342	A-5C
R0343	A-5B
R0512	B-2D

IDENTIFICATION OF PARTS LOCATION

VCA 2/2

Symbol No	Parts Location
R0344	B-4C
R0346	B-5E
R0347	B-5E
R0354	B-4E
R0355	B-4E
R0356	B-4E
R0357	B-4D
R0359	B-4D
R0364	B-5D
R0366	B-5E
R0371	B-5E
R0373	B-5D
R0374	B-4E
R0382	B-5E
R0383	A-4D
R0384	B-5D
R0390	A-2G
R0391	A-2F
R0394	A-3F
R0397	A-2F
R0399	B-4E
R0401M	A-7F
R0402M	A-7F
R0405M	A-7F
R0410M	A-6F
R0412M	A-6F
R0414M	A-6E
R0417M	A-6E
R0419M	A-6E
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R0425M	B-6E
R0426M	A-6E
R0427M	B-5E
R0429M	A-7E
R0430M	A-7E
R0431M	A-7E
R0432M	A-7E
R0436M	A-6F
R0437M	A-6G
R0441M	A-5E
R0443M	A-5E
R0459M	A-5E
R0463M	B-7E
R0497L	A-1G
R0497R	A-1G
R0501	B-3C
R0502	B-3C
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R0513	B-2D
R0514	B-2D
R0516	B-2D
R0517	B-2D
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R0519	B-3D
R0522	B-3D
R0525	B-3C
R0529	B-3E
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R0531	B-3F
R0532	B-3E
R0533	B-3E
R0534	B-1B
R0538	A-3E
R0539	A-3E
R0540	A-3E
R0541	A-3D
R0544	B-3D
R0545	B-3D
R0546	B-1B
R0549	A-2D
R0550	A-2D
R0551	B-2D
R0552	B-2D
R0555	B-3D
R0556	B-3D
R0558	B-3D
R0561	B-1E
R0562	B-2E
R0566	B-1E
R0567	B-2E
R0583	B-6D
R0585	B-4E
R0601	B-3B
R0602	B-3B
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R0624	B-2B
R0628	B-2B
R0640	B-9E
R0641	B-9F
R0642	B-9F
R0643	A-9E
R0644	A-9E
R0662	A-1B
R0663	A-1B
R0671	A-6A
R0672	A-6A
R0681	A-5F
R0682	A-5F
R0691	B-2B
R0692	B-2B
R0693	B-1B
R0694	B-2B
R0695	B-2B
R0696	B-1B
R0701	B-3A
R0702	A-9F
R0703	B-4E
R0704	B-2A
R0706	B-1C
R0707	B-1C
R0708	B-1C
R0709	B-6B
R0720	B-3C
R0721	B-1E
R0722	B-1D
R0723	B-1D
R0724	B-1D
R0725	B-1D
R0728	B-5B
R0729	B-5B
R0733	A-2A
R0739	B-2B
R0740	B-2B
R0741	A-3A
R0744	A-3A
R0746	B-3B
R0752	B-2B
R0753	A-4E
R0754	B-9F
R0755	B-9F
R0901	A-2C
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R0905	A-2C
R0906	A-2C
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R0933	B-2A
R0934	B-3A
R0935	B-2A
R0938	B-2A
R0940	A-2C
R0941	A-3A
R0942	A-3B
R0943	A-3B
R0944	B-4D
R0945	A-3B
R0947	B-3B
R0948	B-1C
R0949	B-1C
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R0969	B-3B
R0971	B-4D
R0972	B-3B
R0974	B-2B
R0975	B-4C
R0976	A-1D
R0977	A-1D
R0978	B-2B
R0979	B-2B
R0980	B-2C
R0981	B-2C
R0982	B-2C
R0983	B-2C
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R0985	A-2B
R0986	B-5C
R0987	B-5B
R0991	B-5B
R0992	B-7E
R0994	A-3A
R0995	A-3A
R0996	B-4C
R0997	B-3B
R0998	B-3B
R0999	B-4D
R1101	B-9B
R1102	A-9B
R1112	A-9B
R1113	A-10A
R1114	A-11B
R1115	B-9B
R1116	B-9B
R1117	B-9B
R1120	B-10B
R1121	A-11B
R1122	A-11C
R1123	A-11C
R1124	A-9C
R1126	B-10C
R1127	B-10C
R1128	B-10C
R1129	B-10C
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R1131	A-10C
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R1133	A-9D
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R1310	B-10C
R1311	B-10C
R1312	A-10A
R1313	A-10A
R1314	A-11B
R1315	A-11B
RT	
RT0103	B-7A
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RT0204	B-5B
RT0205	B-5B
RT0206	B-5C
RT0207	B-5C
RT0209	B-6B
RT0210	B-4C
RT0211	B-5D
RT0212	B-5C
RT0215	B-6C
RT0216	B-5C
RT0302	B-7D
SW	
SW0902	B-1D
SW0903	B-1D
SW0904	B-1C
SW0905	B-1D
SW0906	B-3A
T	
T0551	A-2D
TL	
TL1130	A-9D
TL1133	B-2B
TL1135	B-11C
TL1213	B-11A
TL1301	A-11C
TL1303	A-11C
TL1305	B-10B
TL1306	B-11A
TL1307	B-11A
TL1308	B-10B
TL1309	B-10C
TL1310	A-10A
TL1311	B-10B
TL1312	B-10B
TL1313	B-9B
TL1314	B-8C
TL1315	A-11B
TL1325	A-11B
TP	
TP0101	B-7C
TP0103	B-8B
TP0201	B-7B
TP0202	B-6D
TP0203	B-7B
TP0204	B-6B
TP0205	B-6C
TP0206	B-6C
TP0207	B-4C
TP0301	B-6D
TP0302	B-7E
TP0401	B-8F
X	
X0201	A-7B
X0901	A-3B
X0902	A-2B
X1101	A-11C

DIFFERENCE TABLE

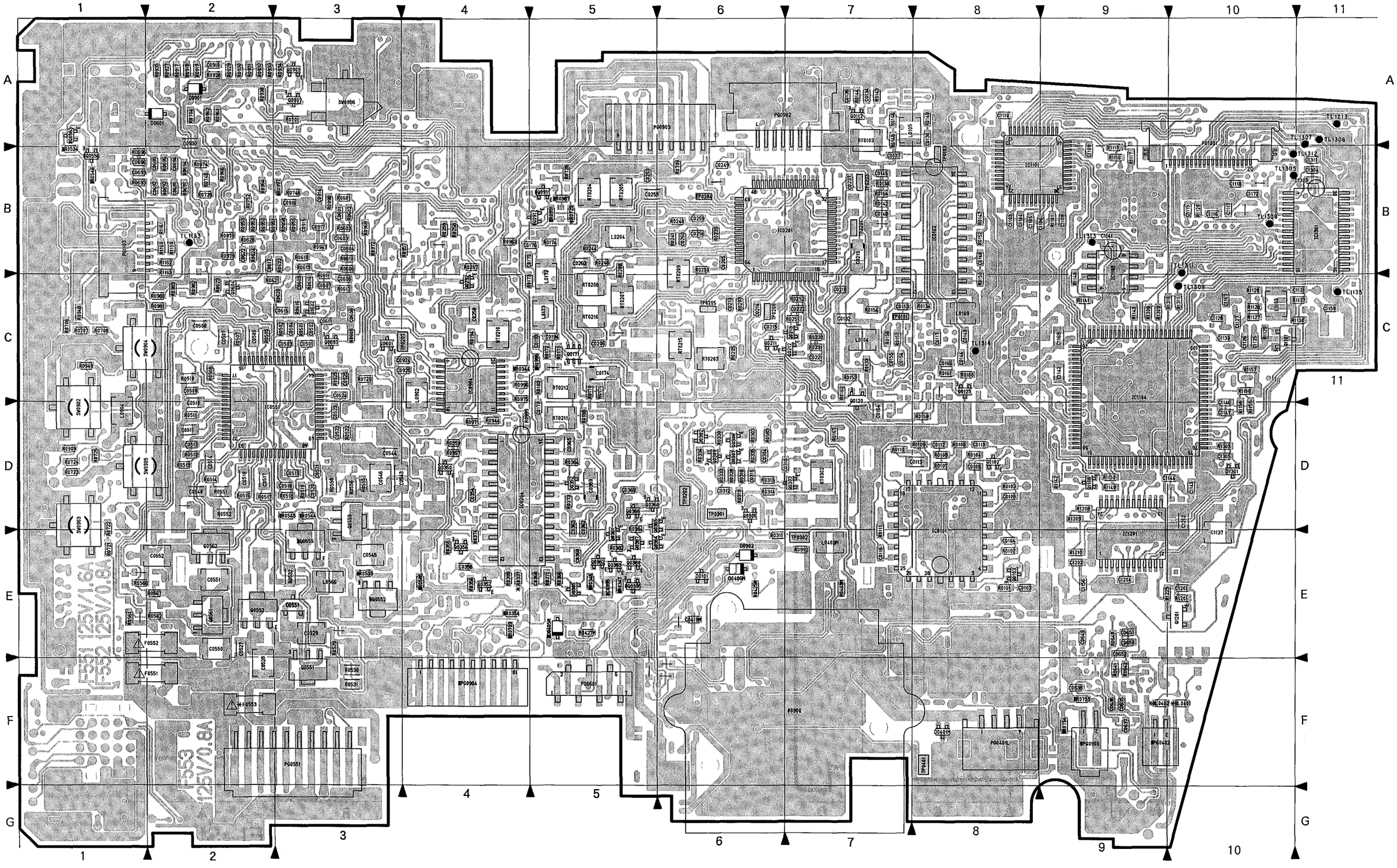
NOTE: This table listes the different components marked with asterisks (*) in the circuit board diagrams.

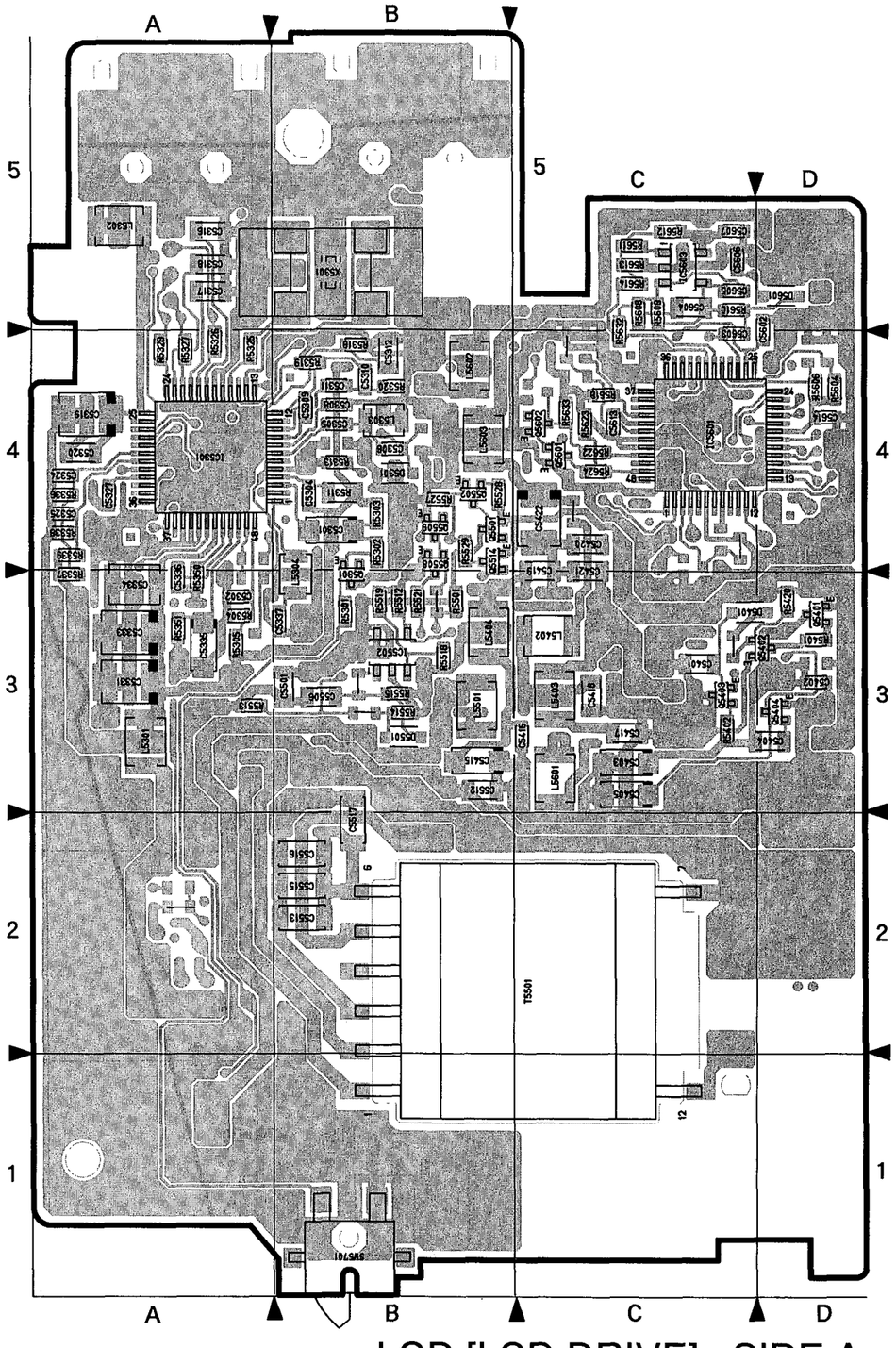
-SIDE B-

SYMBOL No.	TYPE 330/340	TYPE 543/548	TYPE 545
BL0401	×	JUMPER	JUMPER
BL0402	×	JUMPER	JUMPER
C0395	×	×	○
D0405M	×	○	○
F0553	×	○	○
PG0402	×	○	○
PG0904	×	○	○
PG0905	×	○	○
Q0395	×	×	○
Q0552	×	○	○
Q0555	×	○	○
Q0556	×	○	○
Q0563	×	○	○
Q0911	×	○	○
Q0912	×	○	○
R0337	JUMPER	×	×
R0344	×	○	○
R0346	×	×	○
R0347	×	×	○
R0354	×	×	○
R0533	×	○	○
R0534	×	○	○
R0544	JUMPER	×	×
R0545	×	○	○
R0546	×	○	○
R0585	×	JUMPER	JUMPER
R0703	×	○	○
R0729	○	×	×
R0754	×	○	○
R0755	×	○	○
R0986	×	○	○
R0987	×	○	○
R0991	×	○	○
R0997	×	○	○

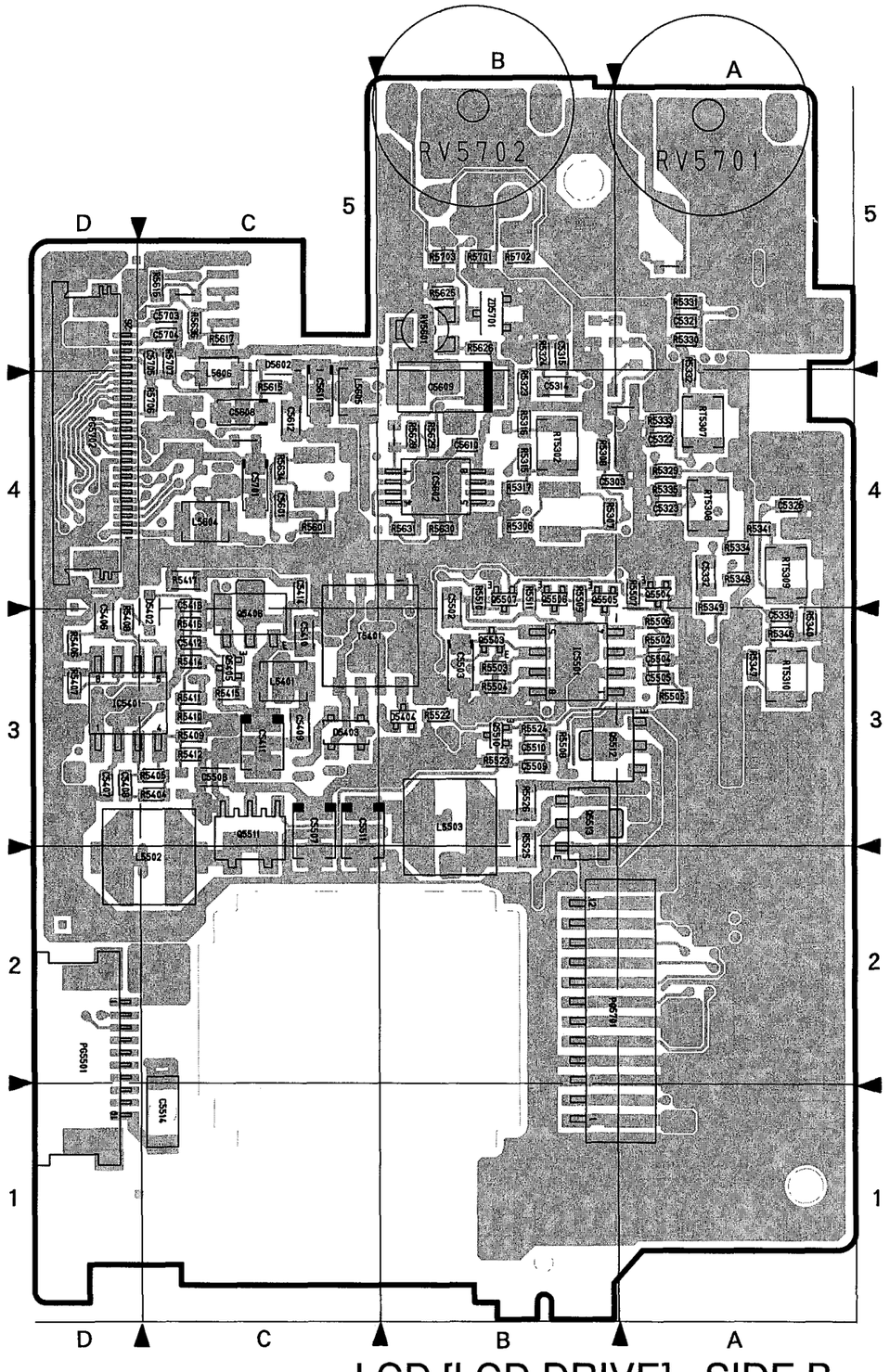
VCA [MAIN] CIRCUIT BOARD – SIDE B –

[PATTERN No. JA1536-2]





LCD [LCD DRIVE] –SIDE A–



LCD [LCD DRIVE] –SIDE B–
[PATTERN No. JA15120-4]

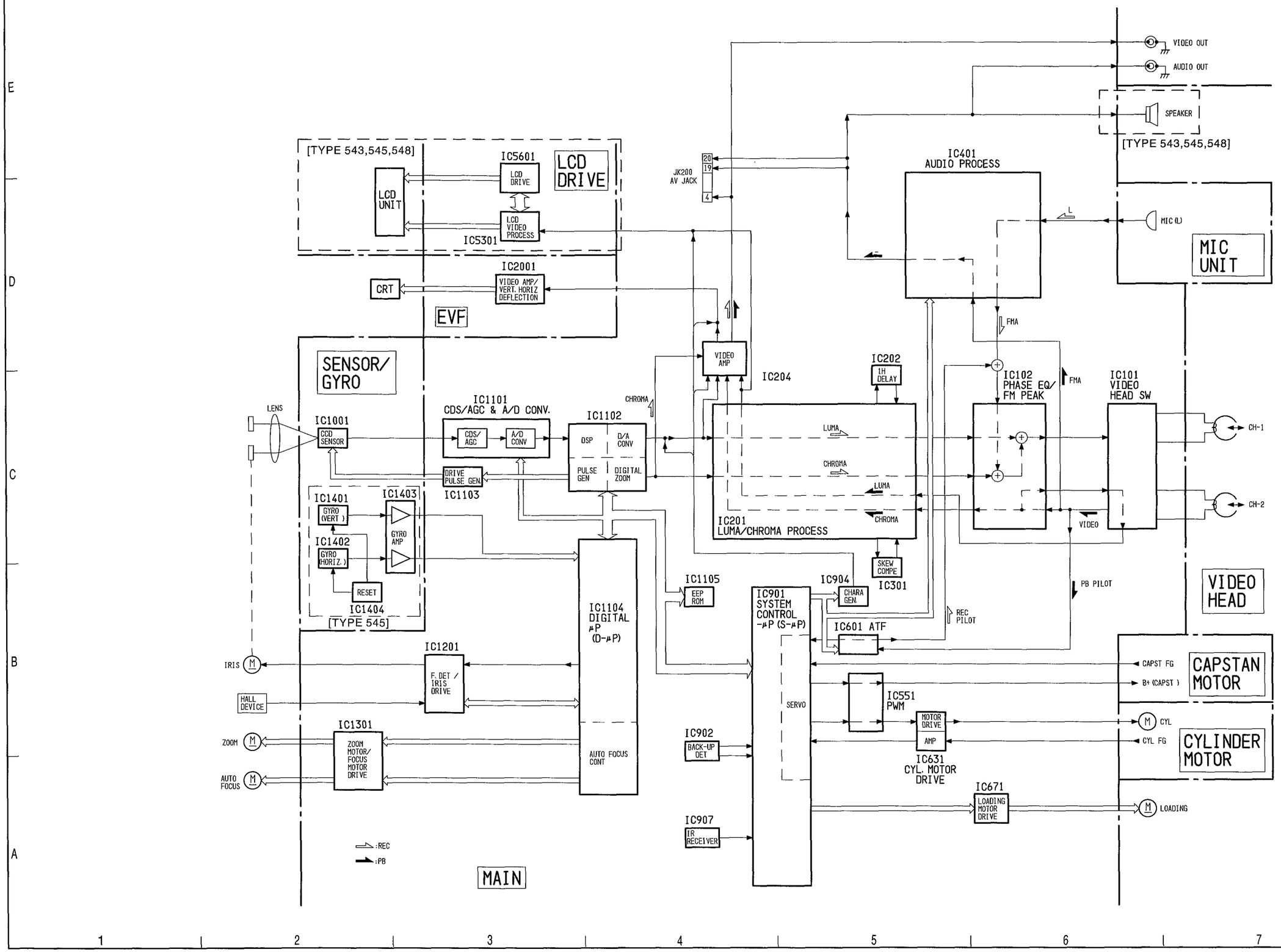
IDENTIFICATION OF PARTS LOCATION

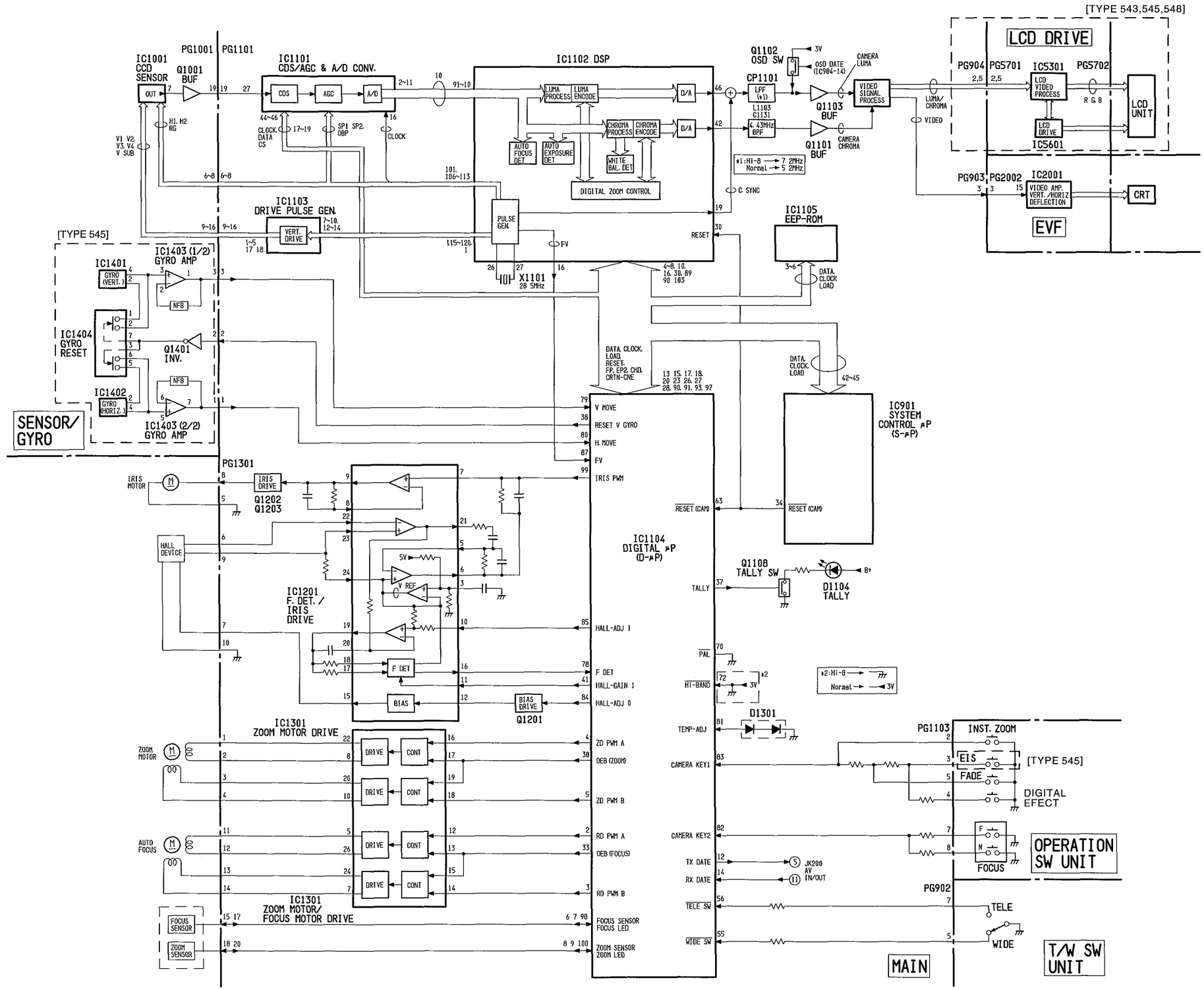
LCD

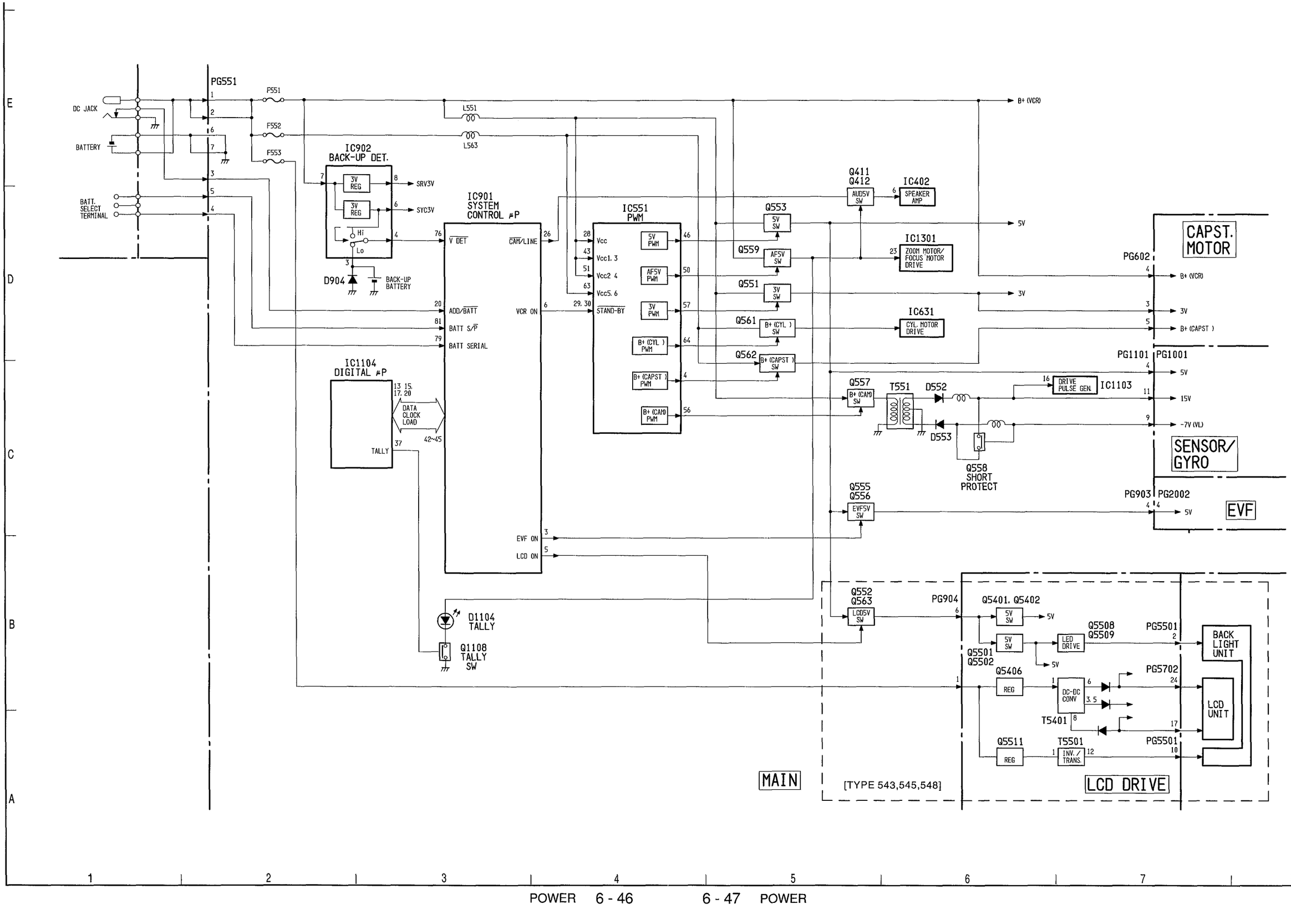
Symbol No	Parts Location
C	
C5301	A-4B
C5302	A-3A
C5303	B-4B
C5304	A-4B
C5305	A-4B
C5306	A-4B
C5308	A-4B
C5309	A-4B
C5310	A-4B
C5311	A-4B
C5312	A-4B
C5314	B-4B
C5315	B-5B
C5316	A-5A
C5317	A-5A
C5318	A-5A
C5319	A-4A
C5320	A-4A
C5321	B-5A
C5322	B-4A
C5323	B-4A
C5324	A-4A
C5325	A-4A
C5326	B-4A
C5327	A-4A
C5330	B-3A
C5331	A-3A
C5332	B-4A
C5333	A-3A
C5334	A-3A
C5335	A-3A
C5336	A-3A
C5337	A-3B
C5401	A-3C
C5402	A-3D
C5403	A-3C
C5404	A-3D
C5405	A-3C
C5406	B-3D
C5407	B-3D
C5408	B-3D
C5409	B-3C
C5410	B-3C
C5411	B-3C
C5412	B-3C
C5413	B-4C
C5414	B-4C
C5415	A-3B
C5416	A-3C
C5417	A-3C
C5418	A-3C
C5419	A-4C
C5420	A-4C
C5421	A-4C
C5422	A-4C
C5501	A-3B
C5502	B-4B
C5503	B-3B
C5504	B-3A
C5505	B-3A
C5506	A-3B
C5507	B-3C
C5508	B-3C
C5509	B-3B
C5510	B-3B
C5511	B-3C
C5512	A-3B
C5513	A-2B
C5514	B-1C
C5515	A-2B
C5516	A-2B
C5517	A-2B
C5601	B-4C
C5602	A-5D
C5603	A-4C
C5604	A-5C
C5605	A-5C
C5606	A-5C
C5607	A-5C
C5608	B-4C
C5609	B-4B
C5610	B-4B
C5611	B-4C
C5612	B-4C
C5613	A-4C
C5614	A-4D
C5701	B-4C
C5703	B-5C
C5704	B-5C
C5705	B-5C
D	
D5301	A-4B
D5401	A-3C
D5402	B-3C
D5403	B-3C
D5404	B-3B
D5501	A-3B
D5601	A-5D
D5602	B-5C
IC	
IC5301	A-4A
IC5401	B-3D
IC5501	B-3B
IC5502	A-3B
IC5601	A-4C
IC5602	B-4B
IC5603	A-5C
L	
L5301	A-3A
L5302	A-5A
L5303	A-4B
L5304	A-3B
L5401	B-3C
L5402	A-3C
L5403	A-3C
L5404	A-3B
L5501	A-3B
L5502	B-2C
L5503	B-3B
L5601	A-3C
L5602	A-4B
L5603	A-4B
L5604	B-4C
L5605	B-4C
L5606	B-4C
PG	
PG5501	B-2D
PG5701	B-2B
PG5702	B-4D
Q	
Q5301	A-3B
Q5401	A-3D
Q5402	A-3D
Q5403	A-3C
Q5404	A-3D
Q5405	B-3C
Q5406	B-3C
Q5501	A-4B
Q5502	A-4B
Q5503	B-3B
Q5504	B-4A
Q5505	B-4B
Q5506	B-4B
Q5507	B-4B
Q5508	A-4B
Q5509	A-4B
Q5510	B-3B
Q5511	B-3C
Q5512	B-3A
Q5513	B-3B
Q5514	A-4B
Q5601	A-4C
Q5602	A-4C
R	
R5301	A-3B
R5302	A-4B
R5303	A-4B
R5304	A-3A
R5305	A-3A
R5306	B-4B
R5307	B-4B
R5308	B-4B
R5311	A-4B
R5313	A-4B
R5315	B-4B
R5316	B-4B
R5317	B-4B
R5318	A-4B
R5319	A-4B
R5320	A-4B
R5323	B-4B
R5324	B-5B
R5325	A-4A
R5326	A-4A
R5327	A-4A
R5328	A-4A
R5329	B-4A
R5330	B-5A
R5331	B-5A
R5332	B-5A
R5333	B-4A
R5334	B-4A
R5335	B-4A
R5336	A-4A
R5337	A-3A
R5338	A-4A
R5339	A-4A
R5340	B-3A
R5341	B-4A
R5346	B-3A
R5347	B-3A
R5348	B-4A
R5349	B-4A
R5350	A-3A
R5351	A-3A
R5401	A-3D
R5402	A-3C
R5404	B-3C
R5405	B-3C
R5406	B-3D
R5407	B-3D
R5408	B-3D
R5409	B-3C
R5410	B-3C
R5411	B-3C
R5412	B-3C
R5414	B-3C
R5415	B-3C
R5416	B-3C
R5417	B-4C
R5420	A-3D
R5501	A-3B
R5502	B-3A
R5503	B-3B
R5504	B-3B
R5505	B-3A
R5506	B-3A
R5507	B-4A
R5508	B-3B
R5509	B-4B
R5510	B-4B
R5511	B-4B
R5512	A-3B
R5513	A-3A
R5514	A-3B
R5515	A-3B
R5516	A-3B
R5517	A-3B
R5518	A-3B
R5519	A-3B
R5520	A-3B
R5521	A-3B
R5522	B-3B
R5523	B-3B
R5524	B-3B
R5525	B-3B
R5526	B-3B
R5527	A-4B
R5528	A-4B
R5529	A-4B
R5601	B-4C
R5604	A-4D
R5606	A-4D
R5608	A-5C
R5609	A-5C
R5610	A-5C
R5611	A-5C
R5612	A-5C
R5613	A-5C
R5614	A-5C
R5615	B-4C
R5616	B-5C
R5617	B-5C
R5618	A-4C
R5622	A-4C
R5623	A-4C
R5624	A-4C
R5625	B-5B
R5626	B-5B
R5628	B-4B
R5629	B-4B
R5630	B-4B
R5631	B-4B
R5632	A-4C
R5633	A-4C
R5634	B-4C
R5636	B-5C
R5701	B-5B
R5702	B-5B
R5703	B-5B
R5706	B-4C
R5707	B-5C
RT	
RT5302	B-4B
RT5307	B-4A
RT5308	B-4A
RT5309	B-4A
RT5310	B-3A
RV	
RV5601	B-5B
RV5701	B-5A
RV5702	B-5B
SW	
SW5701	A-1B
T	
T5401	B-3C
T5501	A-2C
X	
X5301	A-5B
ZD	
ZD5701	B-5B

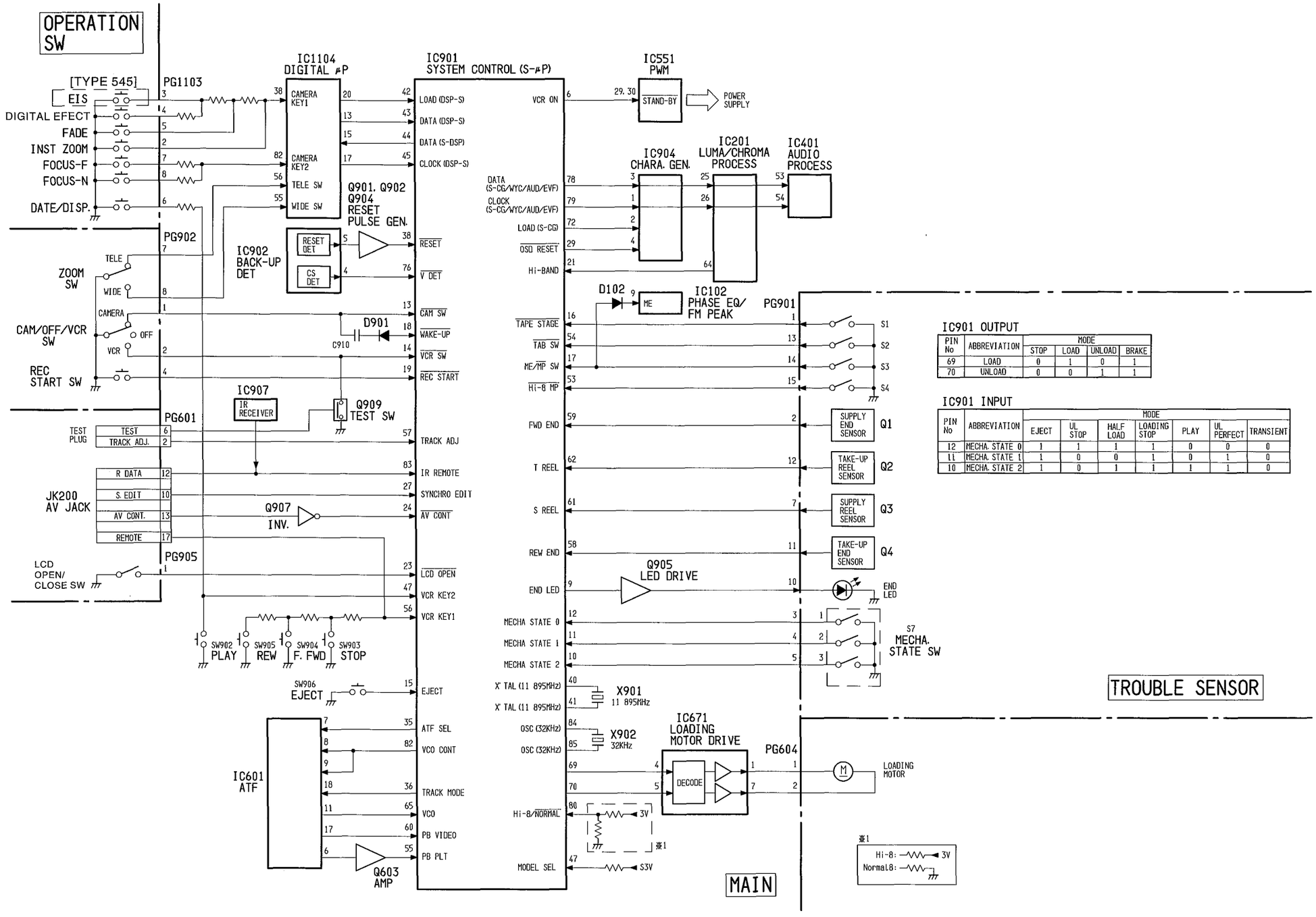
BLOCK DIAGRAMS

1. OVERALL




[TYPE 543,545,548]
LCD DRIVE
PG904 PG5701 IC5301 PG5702
LCD VIDEO PROCESS
LCD DRIVE
IC5601
R G B
LCD UNIT
PG903 PG2002 IC2001
VIDEO AMP. VERT./HORIZ DEFLECTION
CRT
EVF
IC1001 CCD SENSOR
Q1001 BUF
PG1001 PG1101
IC1101 CDS/AGC & A/D CONV.
CDS
AGC
A/D
IC1102 DSP
LUMA PROCESS
LUMA ENCODE
CHROMA PROCESS
CHROMA ENCODE
AUTO FOCUS DET
AUTO EXPOSURE DET
WHITE BAL. DET
DIGITAL ZOOM CONTROL
D/A
Q1102 OSD SW
CP1101
LPF (*1)
L1103 C1131
4.43MHz BPF
Q1103 BUF
Q1101 BUF
CAMERA LUMA
CAMERA CHROMA
VIDEO SIGNAL PROCESS
LUMA/CHROMA
VIDEO
OSD DATE (IC904-14)
3V
*1:Hi-B → 7.2MHz
Normal → 5.2MHz
C. SYNC
IC1103 DRIVE PULSE GEN.
VERT. DRIVE
PULSE GEN.
FV
X1101 28.5MHz
IC1105 EEP-ROM
DATA. CLOCK LOAD
RESET
[TYPE 545]
SENSOR/ GYRO
IC1401 GYRO (VERT.)
IC1403 (1/2) GYRO AMP
IC1404 GYRO RESET
Q1401 INV.
IC1402 GYRO (HORIZ.)
IC1403 (2/2) GYRO AMP
NFB
PG1301
IRIS MOTOR
IRIS DRIVE
Q1202 Q1203
HALL DEVICE
IC1201 F. DET./ IRIS DRIVE
5V REF
F DET
BIAS
BIAS DRIVE
Q1201
IC1301 ZOOM MOTOR DRIVE
ZOOM MOTOR
AUTO FOCUS
DRIVE
CONT
IC1301 ZOOM MOTOR/ FOCUS MOTOR DRIVE
FOCUS SENSOR
ZOOM SENSOR
DATA. CLOCK. LOAD. RESET. FP. EP2. CHD. CRTN-CNE
IC901 SYSTEM CONTROL μP (S-μP)
V MOVE
RESET V GYRO
H MOVE
FV
IRIS PWM
HALL-ADJ 1
F DET
HALL-GAIN 1
HALL-ADJ 0
ZD PWM A
OEB (ZOOM)
ZD PWM B
RD PWM A
OEB (FOCUS)
RD PWM B
FOCUS SENSOR
FOCUS LED
ZOOM SENSOR
ZOOM LED
IC1104 DIGITAL μP (D-μP)
RESET (CAM)
Q1108 TALLY SW
D1104 TALLY
D1301
PAL
HI-BAND
TEMP-ADJ
CAMERA KEY1
CAMERA KEY2
TX DATE
RX DATE
TELE SW
WIDE SW
*2:Hi-B → 3V
Normal → 3V
JK200 AV IN/OUT
PG1103
INST. ZOOM
EIS
FADE
[TYPE 545]
DIGITAL EFECT
PG902
FOCUS
TELE
WIDE
OPERATION SW UNIT
T/W SW UNIT
MAIN


PG551
DC JACK
BATTERY
BATT. SELECT TERMINAL
F551
F552
F553
L551
L563
B+ (VCR)
IC902 BACK-UP DET.
3V REG
3V REG
SRV3V
SYC3V
Hi
Lo
D904
BACK-UP BATTERY
IC901 SYSTEM CONTROL μP
V DET
CAM/LINE
ADD/BATT
VCR ON
BATT S/P
BATT SERIAL
IC1104 DIGITAL μP
DATA CLOCK LOAD
TALLY
EVF ON
LCD ON
D1104 TALLY
Q1108 TALLY SW
IC551 PWM
Vcc
Vcc1. 3
Vcc2. 4
Vcc5. 6
STAND-BY
5V PWM
AF5V PWM
3V PWM
B+ (CYL.) PWM
B+ (CAPST) PWM
B+ (CAM) PWM
Q553 5V SW
Q559 AF5V SW
Q551 3V SW
Q561 B+ (CYL.) SW
Q562 B+ (CAPST) SW
Q411 Q412 AUD5V SW
IC402 SPEAKER AMP
5V
3V
IC1301 ZOOM MOTOR/ FOCUS MOTOR DRIVE
IC631 CYL. MOTOR DRIVE
Q557 B+ (CAM) SW
T551
D552
D553
IC1103 DRIVE PULSE GEN.
Q558 SHORT PROTECT
Q555 Q556 EVF5V SW
PG602
CAPST. MOTOR
B+ (VCR)
3V
B+ (CAPST)
PG1101
PG1001
5V
15V
-7V (VL)
SENSOR/ GYRO
PG903
PG2002
EVF
Q552 Q563 LCD5V SW
PG904
Q5401. Q5402
Q5508 Q5509
Q5501 Q5502
Q5406
Q5511
T5401
T5501
PG5501
PG5702
BACK LIGHT UNIT
LCD UNIT
LED DRIVE
DC-DC CONV
REG
INV. / TRANS.
MAIN
[TYPE 543,545,548]
LCD DRIVE

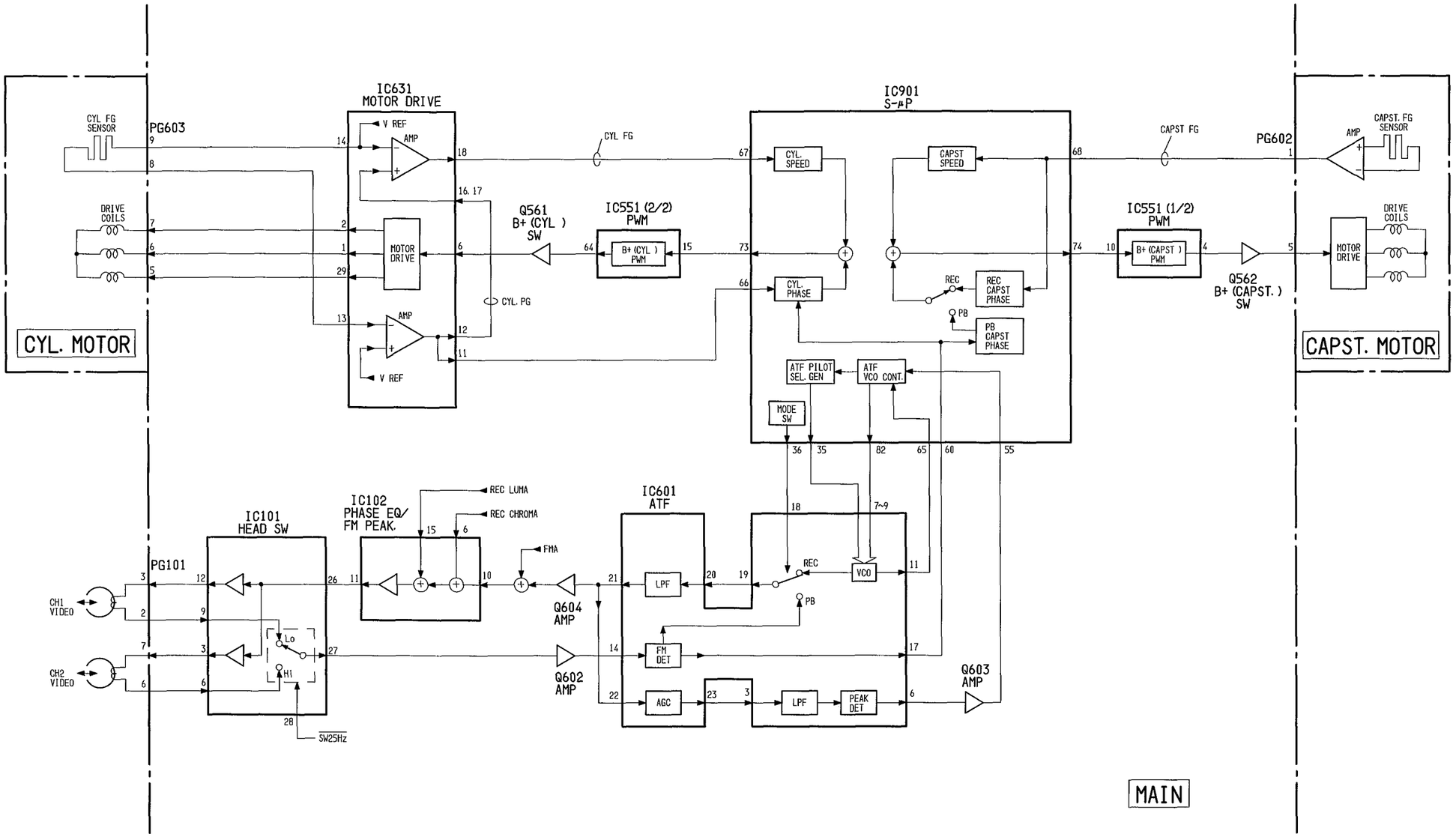


IC901 OUTPUT

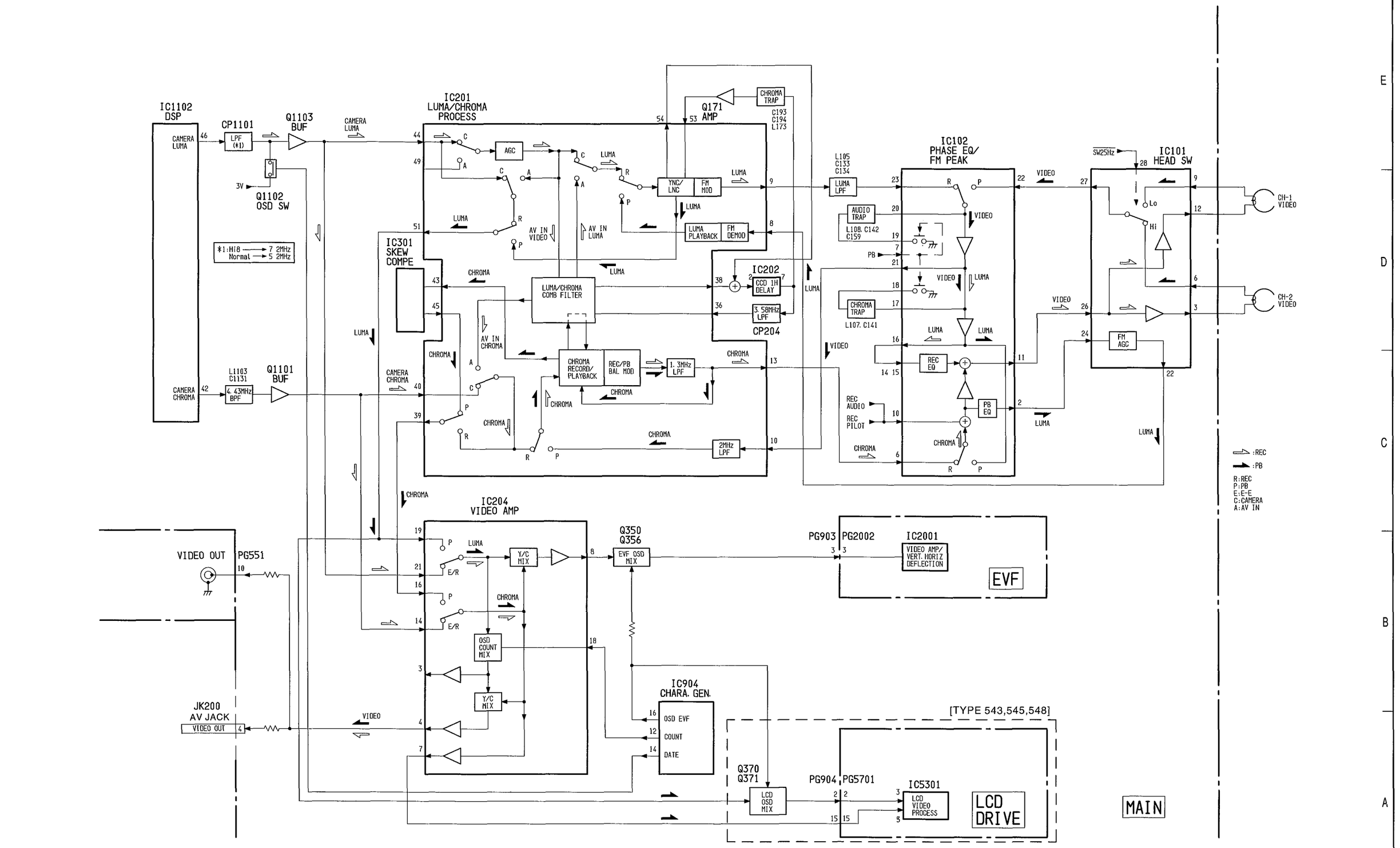
PIN No	ABBREVIATION	MODE			
		STOP	LOAD	UNLOAD	BRAKE
69	LOAD	0	1	0	1
70	UNLOAD	0	0	1	1

IC901 INPUT

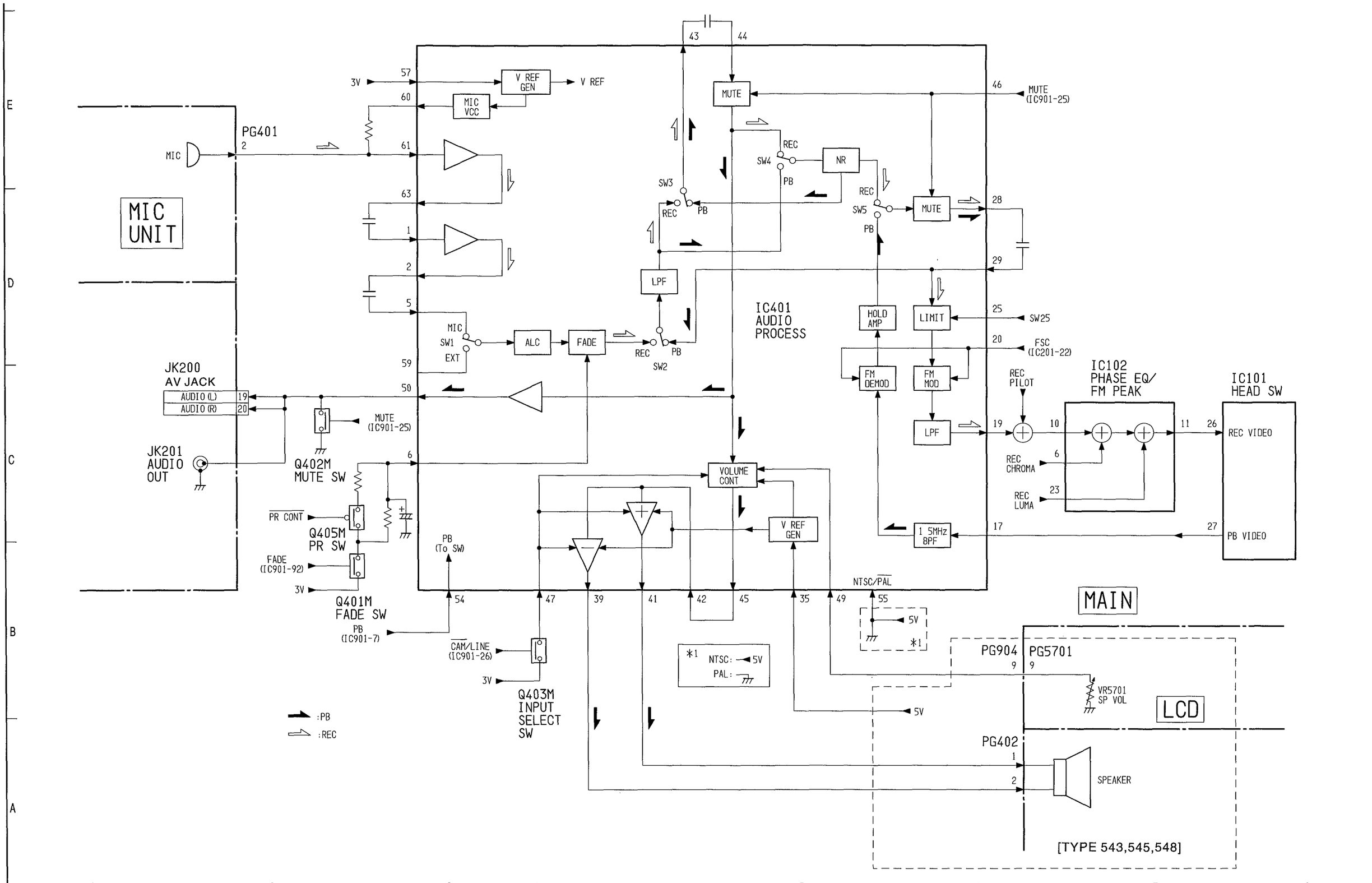
PIN No	ABBREVIATION	MODE						
		EJECT	UL STOP	HALF LOAD	LOADING STOP	PLAY	UL PERFECT	TRANSIENT
12	MECHA. STATE 0	1	1	1	1	0	0	0
11	MECHA. STATE 1	1	0	0	1	0	1	0
10	MECHA. STATE 2	1	0	1	1	1	1	0


CYL. MOTOR
CYL FG SENSOR
PG603
DRIVE COILS
IC631
MOTOR DRIVE
V REF
AMP
MOTOR DRIVE
CYL. PG
Q561
B+ (CYL) SW
IC551 (2/2)
PWM
B+ (CYL) PWM
CYL FG
IC901
S-μP
CYL. SPEED
CYL. PHASE
CAPST SPEED
REC
REC CAPST PHASE
PB
PB CAPST PHASE
ATF PILOT SEL. GEN
ATF VCO CONT.
MODE SW
CAPST FG
PG602
IC551 (1/2)
PWM
B+ (CAPST) PWM
Q562
B+ (CAPST.) SW
CAPST. FG SENSOR
CAPST. MOTOR
IC101
HEAD SW
PG101
CH1 VIDEO
CH2 VIDEO
Lo
Hi
SW25Hz
IC102
PHASE EQ/
FM PEAK.
REC LUMA
REC CHROMA
FMA
Q604
AMP
Q602
AMP
IC601
ATF
LPF
FM DET
AGC
PEAK DET
VCO
Q603
AMP
MAIN

6. VIDEO


IC1102
DSP
CAMERA LUMA
CAMERA CHROMA
CP1101
LPF (*1)
3V
Q1102
OSD SW
Q1103
BUF
Q1101
BUF
L1103
C1131
4.43MHz BPF
*1:Hi8 → 7.2MHz
Normal → 5.2MHz
IC201
LUMA/CHROMA PROCESS
AGC
YNC/LNC
FM MOD
LUMA PLAYBACK
FM DEMOD
AV IN VIDEO
AV IN LUMA
AV IN CHROMA
LUMA/CHROMA COMB FILTER
CHROMA RECORD/PLAYBACK
REC/PB BAL MOD
1.3MHz LPF
2MHz LPF
CHROMA TRAP
C193
C194
L173
Q171
AMP
IC202
CCD 1H DELAY
3.58MHz LPF
CP204
IC301
SKEW COMPE
L105
C133
C134
LUMA LPF
AUDIO TRAP
L108. C142
C159
CHROMA TRAP
L107. C141
IC102
PHASE EQ/
FM PEAK
REC EQ
PB EQ
REC AUDIO
REC PILOT
SW25Hz
IC101
HEAD SW
FM AGC
CH-1 VIDEO
CH-2 VIDEO
:REC
:PB
R:REC
P:PB
E:E-E
C:CAMERA
A:AV IN
IC204
VIDEO AMP
Y/C MIX
OSD COUNT MIX
E/R
Q350
Q356
EVF OSD MIX
PG903
PG2002
IC2001
VIDEO AMP/
VERT.HORIZ
DEFLECTION
EVF
VIDEO OUT
PG551
JK200
AV JACK
IC904
CHARA. GEN.
OSD EVF
COUNT
DATE
[TYPE 543,545,548]
Q370
Q371
LCD OSD MIX
PG904
PG5701
IC5301
LCD VIDEO PROCESS
LCD DRIVE
MAIN

7. AUDIO


MIC UNIT
PG401
MIC
2
3V
57
60
61
63
1
2
5
V REF GEN
V REF
MIC VCC
MIC SW1 EXT
ALC
FADE
LPF
REC PB
SW2
43
44
MUTE
46
MUTE (IC901-25)
SW3 REC PB
SW4 REC PB
NR
SW5 REC PB
MUTE
28
29
IC401 AUDIO PROCESS
HOLD AMP
LIMIT
25
SW25
20
FSC (IC201-22)
FM DEMOD
FM MOD
LPF
1 5MHz BPF
REC PILOT
19
10
11
26
REC VIDEO
REC CHROMA
6
REC LUMA
23
17
27
PB VIDEO
IC102 PHASE EQ/ FM PEAK
IC101 HEAD SW
JK200 AV JACK
AUDIO (L) 19
AUDIO (R) 20
JK201 AUDIO OUT
MUTE (IC901-25)
Q402M MUTE SW
PR CONT
Q405M PR SW
FADE (IC901-92)
3V
Q401M FADE SW
PB (To SW)
PB (IC901-7)
CAM/LINE (IC901-26)
3V
Q403M INPUT SELECT SW
VOLUME CONT
V REF GEN
54
47
39
41
42
45
35
49
NTSC/PAL
55
5V
*1
*1 NTSC: 5V
PAL:
5V
MAIN
LCD
PG904
9
PG5701
9
VR5701 SP VOL
PG402
1
2
SPEAKER
[TYPE 543,545,548]
:PB
:REC
A
B
C
D
E
1
2
3
4
5
6
7
8

MICROPROCESSOR PIN FUNCTION TABLES

1. Digital Microprocessor (IC1104: D-μP)

Pin No.	I/O	Active Level	Abbreviation	Function
1	-----	------	VCC	3V power input.
2	O	PWM	RD-PWM-A	Outputs focus motor drive signal to IC1301 (FOCUS MOTOR/ZOOM MOTOR DRIVE).
3	O	PWM	RD-PWM-B	
4	O	PWM	ZD-PWM-A	Outputs zoom motor drive signal to IC1301 (FOCUS MOTOR/ZOOM MOTOR DRIVE).
5	O	PWM	ZD-PWM-B	
6	O	(Pulse)	FCS-LED1	Output pulses to drive the LEDs in the focus reset switches (FOCUS RESET SW).
7	O	(Pulse)	FCS-LED2	
8	O	(Pulse)	ZOOM LED1	Output pulses to drive the LEDs in the zoom reset switches (ZOOM RESET SW).
9	O	(Pulse)	ZOOM LED2	
10	-----	-----	RESO[Lo]	Not used. Open.
11	-----	-----	VSS	Ground.
12	O	(Pulse)	SD (232C)	Used for initial settings and adjustment. For data communications with personal computer.
14	I	(Pulse)	RD (232C)	
13	O	(Pulse)	SD	For data communications with IC1102 (DSP), IC1105 (EEP-ROM) and IC901 (S-μP).
15	I	(Pulse)	S1	
17	O	(Pulse)	CLK	
16	-----	-----	----------	Not used. Open.
18	O	(Pulse)	LD-DSP	Activates data communications with IC1102 (DSP).
19	-----	-----	CS-MB	Not used. Open.
20	O	(Pulse)	CS-MA	Activates data communications with IC901 (S-μP).
21	-----	-----	LD-EV	Not used. Open.
22	-----	-----	VSS	Ground.
23	O	Lo	CS-EE	Activates data communications with IC1105 (EEP-ROM).
24	-----	-----	----------	Not used. Open.
25	-----	-----	----------	
26	O	(Pulse)	CS-CDS	Transfer data to IC1101 (CDS/AGC).
27	O	(Pulse)	CLK-CDS	
28	O	(Pulse)	SD-CDS	
29	-----	-----	ZD-RESET	Not used. Open.
30	O	Hi	ZDOEB	Activates data communications with IC1301 (FOCUS MOTOR/ZOOM MOTOR DRIVE).
31	-----	-----	ZDCW	Not used. Open.
32	-----	-----	RD-RESET	
33	O	(Pulse)	RDOEB	Activates data communications with IC1301 (FOCUS MOTOR/ZOOM MOTOR DRIVE).
34	-----	-----	RDCW	Not used. Open.
35	-----	-----	VCC	3V power input.
36	-----	-----	LD-VDRV	Not used. Open.
37	O	Hi	TALLY	Drives Q1108 (TALLY SW) to turn on the record LED during recording.
38	O	Hi	VGRO-RES	Drives IC1404 (GYRO RESET) via Q1401 (INV.) to reset IC1401 (V. GYRO) and IC1402 (H. GYRO).
39	-----	-----	HGRO-RES	Not used. Open.
40	-----	-----	HALL G0	
41	O	Hi	HALL G1	Control the amplification (gain of Hall device) of IC1201 (F.DET/IRIS DRIVE).
42	-----	-----	JIG-LOAD	Not used. Open.
43	-----	-----	CHECKB	
44	-----	-----	VSS	Ground.
45	----	-----	----------	Not used. Open.
46	----	-----	----------	
47	----	-----	----------	
48	----	-----	----------	
49	----	-----	----------	
50	----	-----	----------	

Pin No.	I/O	Active Level	Abbreviation	Function
51	-----	-----	----------	Not used. Open.
52	-----	-----	----------	
53	-----	-----	BRST-FLG	
54	-----	-----	T/W-FAST	
55	I	Lo	WIDE-SW	Zoom switch detection inputs.
56	I	Lo	TELE-SW	
57	-----	-----	VSS	Ground.
58	-----	-----	CLK-EV	Not used. Open.
59	-----	-----	SD-EV	
60	-----	-----	PWR-SAVE	
61	-----	-----	----------	
62	I	Lo	STBY[Lo]	No used. Connected to 3V power supply.
63	I	Lo	RESET[Lo]	Reset signal input from IC901 (S-μP).
64	I	Lo	NM1[Lo]	Not used. Connected to 3V power supply.
65	-----	-----	VSS	Ground.
66	I	(Pulse)	XIN	Clock pulse input from IC1102 (DSP).
67	-----	-----	XOUT	Not used. Open.
68	-----	-----	VCC	3V power input.
69	-----	-----	----------	Not used. Open.
70	I	Hi/Lo	PAL[Lo]	NTSC model: Not used. Connected to 3V power supply. PAL model: Used. Connected to ground.
71	I	Hi/Lo	SECAM[Lo]	Not used. Connected to 3V power supply.
72	I	Hi/Lo	Hi-BAND[Lo]	Normal 8 model: Not used. Connected to 3V power supply. Hi-8 model: Used. Connected to ground.
73	I	Lo	MD0	Not used. Ground.
74	I	Hi	MD1	Not used. Connected to 3V power supply.
75	I	Hi	MD2	
76	-----	-----	AVCC	5V power input (for analog circuits in microprocessor).
77	-----	-----	VREF	A/D reference voltage input (connected to 5V power supply).
78	-----	0V-5V	FDET	F-value detection input. Receives the F.DET voltage detected by IC1201 (F.DET/IRIS DRIVE) and compares this with the reference voltage input via pin 77 to detect the F-value.
79	I	0V-5V	V-MOVE	Receives vertical camera shake correction data from IC1401 (GYRO (VERT.)) via IC1403 (GYRO AMP).
80	I	0V-5V	H-MOVE	Receives horizontal camera shake correction data from IC1402 (GYRO (HORIZ.)) via IC1403 (GYRO AMP).
81	I	0V-5V	TEMP-ADJ	Temperature change detection input. Detects variations in the forward voltage at the connected diode to correct the back-focus.
82	I	0V-5V	CAM-KEY2	Camera switch detection input (Manual focus).
83	I	0V-5V	CAM-KEY1	Camera switch detection input (EIS, fade, cinema mode, instant zoom).
84	O	0V-5V	HAL-ADJ0	Drives bias generator in IC1201 (F.DET/IRIS DRIVE) via Q1201 (BUF) to control the bias voltage of the Hall devices.
85	O	0V-5V	HAL-ADJ.1	Controls the offset voltage of IC1201 (F.DET/IRIS DRIVE).
86	-----	-----	AVSS	Ground.
87	I	(Pulse)	FV	Receives the vertical sync pulses that detect the iris detection area, from IC1103 (DSP).
88	-----	-----	NEAR-SW	Not used. Open.
89	-----	-----	FAR-SW	Not used. Open.
90	I	(Pulse)	FP	Field discrimination pulse input.
91	I	(Pulse)	EP2	Receives pulses which discriminate the iris detection area.
92	----	-----	VSS	Ground.
93	I	(Pulse)	CHD(CNE)	Horizontal sync input.
94	-----	-----	----------	Not used. Open
95	-----	-----	SUB-PWM	
96	-----	-----	----------	

Pin No.	I/O	Active Level	Abbreviation	Function
97	O	(Pulse)	CRTN-CNE	Supplies pulses to IC1102 (DSP) to control the wipe fade operation.
98	I	(Pulse)	FOCS-SEN	Focus motor position detection input.
99	-----	(Pulse)	IRIS PWM	Iris motor drive output .
100	I	(Pulse)	ZOOM-SEN	Zoom motor position detection input.

2. System Control Microprocessor (IC901: S-μP)

Pin No.	I/O	Active Level	Abbreviation	Function
1	O	Lo	CH2. REC[Lo]	Output the signals to select the video heads for recording.
2	O	Lo	CH1. REC[Lo]	Go "Lo" in the corresponding channel period during recording.
3	O	Hi/Lo	EVF. ON	EVF power control output. Outputs "Hi" when power is turned on.
4	O	(Pulse)	SW25Hz	Head switching pulse output.
5	O	Hi/Lo	LCD. ON	LCD power control output. Outputs "Hi" when power is turned on.
6	O	Hi/Lo	VCR ON	Power control output. Outputs "Hi" when power is turned on.
7	O	Hi/Lo	PB	Output to control the mode of the video processor. Goes "Hi" during playback.
8	O	Hi	D-STANDBY	Cylinder motor start auxiliary output. Outputs "Hi" for 50 ms when the motor is started in the forward rotation direction.
9	O	(Pulse)	END LED	End LED drive output. Outputs pulses of approx. 50Hz when power is turned on.
10	I	0V-3V	M-SW2	Mechanism state switch position (mode) detection input.
11	I	0V-3V	M-SW1	
12	I	0V-3V	M-SW0	
13	I	Lo	CAM SW[Lo]	Power switch detection input. "Lo" is input during recording (camera mode).
14	I	Lo	VCR SW[Lo]	Power switch detection input. "Lo" is input during playback (VCR mode).
15	I	Lo	EJECT SW[Lo]	Eject switch detection input. When "Lo" is input, the camcorder performs the eject operation even when the power is turned off (standby release input).
16	I	Lo	STAGE[Lo]	Cassette holder open/close detection input. "Lo" is input when the cassette holder is closed.
17	I	Hi/Lo	ME/MP[Lo]	Input to discriminate the type of tape. Hi: ME (metal evaporated) tape, Lo: MP (metal particle) tape.
18	I	Lo	WAKE UP[Lo]	Standby release input. When the camera power is turned on, "Lo" is input to release the standby mode. IC901 detects the inputs of each switch to start operation.
19	I	Lo	REC START[Lo]	Recording start/stop switch detection input.
20	I	Hi/Lo	ADP/BATT[Lo]	Power supply detection input. Hi: AC adapter, Lo: Battery.
21	I	Hi	HIBAND	Playback mode detection input. IC901 receives the playback mode detection signal sensed by IC201 (VIDEO PROCESS) and instructs IC904 (CHARA. GEN.) to generate the display signals and also transfers the operation mode data to IC201. Open for models with which only normal tapes are used.
22	I	Hi	TEST PROG.	Test program start detection input. A test program is executed when "Hi" is input.
23	I	Hi/Lo	LCD OPEN[Lo]/ CLOSE	Input to siscriminate the state of LCD panel is opened or closed. Hi: Close, Lo: Open.
24	I	Lo	AV CONT	Input to detect whether an external AV signal is input or not. "Lo" is input when an AV input cable is connected to the AV input/output connector (JK200: AV IN/OUT).
25	O	Hi	MUTE	Audio muting output. Outputs "Hi" to mute sound.
26	O	Hi/Lo	CAM[Lo]/LINE	Video processor mode control output. Outputs "Lo" during camera recording and "Hi" with an external (line) signal.
27	O	Hi/Lo	S.EDIT	Table-top VCR mode control output. The operation mode of the VCR connected to JK200 (AV IN/OUT) is controlled remotely using the pause switch.
28	O	Hi	TRICK	Controls the video processor operation mode. Outputs "Hi" during trick play.

Pin No.	I/O	Active Level	Abbreviation	Function
29	O	Lo	OSD RESET [Lo]	Outputs "Lo" with power on and is set to open with power off to initialize IC904 (CHARA. GEN.).
30	O	Lo	TRICK	Controls the LCD control circuit operation mode. Outputs "Hi" during trick play.
31	O	Hi	C.STANDBY	Capstan motor power control output.
32	O	Lo	SW+B(VCR ON) [Lo]	Power control output. Outputs "Lo" when power is turned off.
33	O	Hi/Lo	LCD NOR/ HI[Lo]	Output to select the LCD display mode.
34	O	Lo	CAM RESET [Lo]	Camera block power supply control output. Outputs "Hi" when power is turned on and "Lo" when power is turned off to initialize the camera block (IC1104: D-μP).
35	O	Hi/Lo	f4SEL	Auto track finding (ATF) pilot signal select output.
36	O	Hi/Lo	TRK. MOD	Output to select the pilot signal from IC601 (ATF). Hi: VCO output, Lo: Playback (PB) FM signal
37	-----	-----	GND	Grounded.
38	I	Lo	SYSTEM RESET[Lo]	Microprocessor reset input. "Lo" input resets the microprocessor.
39	-----	-----	GND	Grounded.
40	O	(Pulse)	XTAL OUT 12MHz	Drive X901 to generate 12MHz main clock pulses.
41	I	(Pulse)	EXTAL IN 12MHz	
42	I	(Pulse)	D-STB(DSP)	For data communications with IC1104 (D-μP).
43	I	(Pulse)	D-DATA(DSP)	
44	O	(Pulse)	S-DATA(DS)	
45	I	(Pulse)	D-CLOCK(DSP)	
46	I	0V-3V	MODEL	Internal mode select input. (Select the NTSC(USA)/NTSC(JAPAN)/PAL etc.)
47	I	0V-3V	VCR KEY2	VCR operation switch detection input (playback, date/title).
48	-----	-----	----------	Not used.
49	I	0V-3V	BATTERY	Input to detect the battery remaining level
50	-----	-----	GND	Grounded.
51	I	-----	AVref	Reference voltage input.
52	-----	-----	AVdd	3V power input.
53	I	0V-3V	HI8MP	Hi-8 MP tape detection input.
54	I	0V-3V	REC INH	Erase prevention tab detection input.
55	I	(Pulse)	PB PILOT	Playback pilot signal (PB PILOT) input.
56	I	0V-3V	VCR KEY1	VCR operation switch detection input (rewind, fast forward, stop).
57	I	0V-3V	TRACK ADJ.	For the connection of a tracking control for adjustment. When an ATF-R jig is connected to PG601 (test plug), the variable resistor on the ATF-R jig can be used as a tracking control.
58	I	(Pulse)	EST	Take-up tape end detection inputs.
59	I	(Pulse)	ESS	Supply tape end detection inputs.
60	I	(Pulse)	PB.ENV	Playback (PB) FM signal input.
61	I	(Pulse)	RSS	Supply/take-up reel sensor inputs. Used to calculate the remaining tape and to detect reel lock.
62	I	(Pulse)	RST	
63	I	Hi/Lo	LCD REVERSE [Lo]	LCD position detection input. Hi: Normal position, Lo: Reverse position.
64	I	(Pulse)	C.SYNC	Composite sync signal input. The separated vertical sync signal is divided by two to generate the 1/2V.SYNC pulse which is used tocontrol the cylinder speed during recording (reference signal).
65	I	(Pulse)	VCO IN	Receive the signal from the VCO in IC601 (ATF) to fix the frequency of the recording pilot signal (VCO's output).
82	O	(Pulse)	VCO CONT	
66	I	(Pulse)	DPG	Tach pulse input. Feedback signal that controls the recording phase of the cylinder.

Pin No.	I/O	Active Level	Abbreviation	Function
67	I	(Pulse)	DFG	Cylinder FG (CYL. FG) pulse input. Controls the cylinder speed during recording and playback.
68	I	(Pulse)	CFG	Capstan FG (CAPST.FG) pulse input. Used for recording restart control (assemble recording).
69	O	Hi	LOAD	Loading motor drive outputs.
70	O	Hi	UNLOAD	
71	O	(Pulse)	EVF-CS	Not used. Open.
72	O	(Pulse)	OSD-CS	Activates communications with IC904 (CHARA. GEN.).
73	O	PWM	D.SPEED	Cylinder servo control outputs.
74	O	PWM	C.SPEED	Capstan servo control outputs.
75	I	(Pulse)	CFG	Capstan FG (CAPST.FG) pulse input. Used for counting of the linear time counter and (assemble recording).
76	I	Lo	V-DET[Lo]	Inputs whether a battery is attached or not. "Lo" is input when the battery is detached, to shift the microprocessor to the backup mode in which the data is saved.
77	-----	-----	----------	Not used.
78	O	(Pulse)	SSB DATA	For data communications with IC904 (CHARA. GEN.), IC201 (LUMA/CHROMA PROCESS) and IC401 (AUDIO PROCESS).
79	O	(Pulse)	SSB CLK	
80	I	Hi/Lo	HI8/NORMAL [Lo]	Internal mode select input (Hi: Hi-8 models, Lo: models used exclusively with normal tapes).
81	I	Hi/Lo	BATT S/P[Lo]	Maker of the battery detection input.
83	I	(Pulse)	REMOCON	Remote operation signal input from the infrared receiver.
84	I	(Pulse)	32MHz TEX IN	Generate 32kHz sub-clock pulses.
85	O	(Pulse)	32MHz TX OUT	
86	-----	-----	GND	Grounded.
87	-----	-----	VDD	3V power input.
88	-----	-----	----------	Not used. Connected to 5V power supply.
89	O	Hi	D.REVERSE	Cylinder motor reversing control output.
90	O	Hi	C.REVERSE	Capstan motor reversing control output
91	O	Hi	REC	Output to control the video processor during recording.
92	O	Hi	T.FADE	Rapid audio fading output. Outputs "Hi" when fading is started to fade the audio signal in rapidly, synchronized with the video signal.
93	O	Hi	FE CONT	Flying erase head oscillation control output
94	O	Lo	PR CONT	Preamp activation signal. Outputs"Hi" during playback to activate the preamp.
95	O	(Pulse)	HD	Artificial H. sync signal output.
96	O	(Pulse)	ADDV+SQ	Artificial V. sync signal + video muting signal output
97	O	(Pulse)	SW25Hz[Lo]	Inverted head switching pulse output
98	O	Hi/Lo	LCD-HOLD	Controls the LCD control circuit operation mode.
99	O	(Pulse)	AUDIO25	Outputs switching pulses to IC401 (AUDIO PROCESS).
100	O	(Pulse)	D.BRAKE	Output the cylinder brake pulse.

CHAPTER 7 APPENDIX

SELF-DIAGNOSTIC FUNCTION

1. OVERVIEW

The camera/recorder has the following self-diagnostic function.

Occasional defect self-diagnostic function (A mode)
Mechanical block self-diagnostic function (B mode)

Fig. 1-1 shows the self-diagnostic coverage range.
The self-diagnostic functions of the camera/recorder are engaged by the system control (main) μP (IC0901) which detects, memorizes and displays data related to defects in the mechanical block control system.

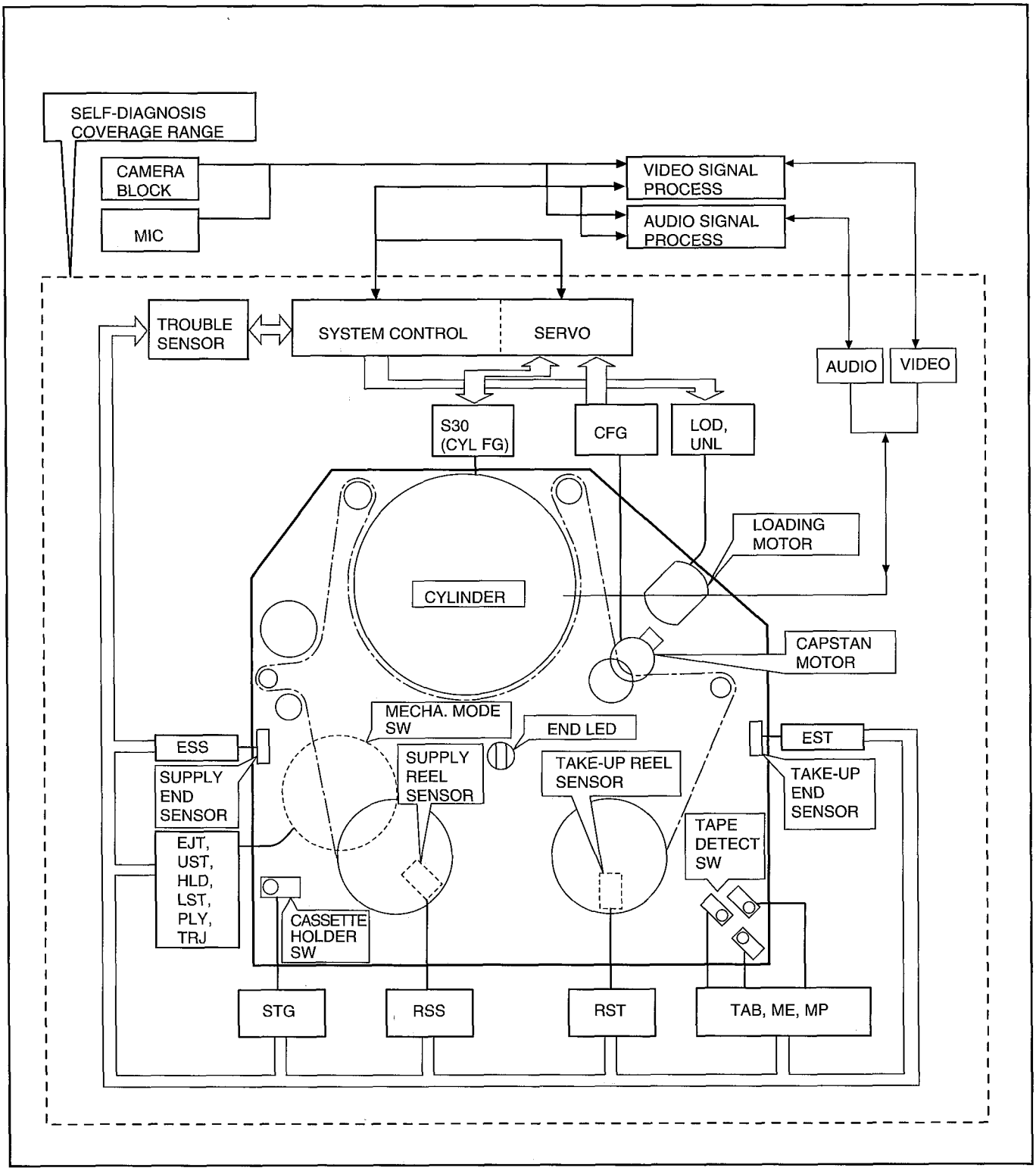


Fig. 1-1 Self-Diagnostic Coverage Range

2. DETAILS OF DISPLAY/DETECTION AND APPLICATIONS

Table 2-1 summarizes the details of display/detection of the self-diagnostic functions and their applications.
Fig. 2-1 shows the operational processes of the self-diagnostic functions.

Table 2-1 Details of Display/Detection of Self-Diagnostic Functions and their Applications

	Occasional defect self-diagnostic function (A mode)	**Mechanical block self-diagnostic function (B mode)**
Details of display/ detection	The system control μ P memorizes and displays the defect data. (If several defects have occurred, only the last defect detected is memorized.)	Displays the data for the defect that has occurred when the B mode is set.
Application	Used when the defective symptom is not reproduced during servicing.	Used to detect the cause of the defect (in the mechanical block or electrical circuits) and to determine the defective position of the mechanical block.
Detected parts	Trouble sensors · Take-up end sensor (EST) · Supply end sensor (ESS) · Take-up reel sensor (RST) · Supply reel sensor (RSS) Cylinder (S30) Capstan motor (CFG)	Trouble sensors · Take-up end sensor (EST) · Supply end sensor (ESS) · Take-up reel sensor (RST) · Supply reel sensor (RSS) Cylinder (S30) Capstan motor (CFG) Loading motor (LOD, UNL) Mechanism mode switch (EJT, UST, HLD, PLY, LST, TRJ) Tape detection switches, etc. · Erase prevention tab detection switch (TAB) · ME/MP detection switch (ME) · Hi-8 MP detection switch (MP) · Cassette holder switch (STG)
Cautions	When the rewind mode is entered, the defect data is erased.	Engage the B mode after completing the A mode. If the B mode is engaged first, the defect data may be erased.

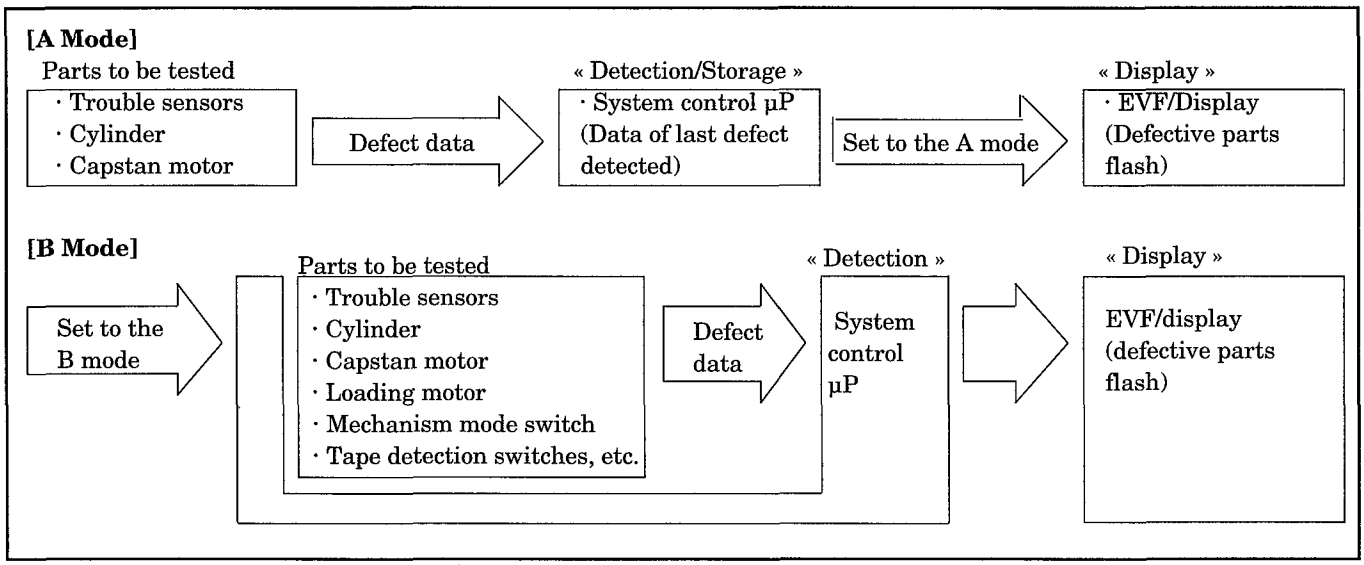


Fig. 2-1 Oeration Processes of Self-Diagnostic Functions

3. SETTING PROCEDURE AND DETAILS OF DIAGNOSIS

3.1 Occasional Defect Self-Diagnostic Function (A Mode)

3.1.1 Setting Procedure

1) Connect (attach) a power supply (battery).

2) Set the power switch to"CAMERA" or "VIDEO".

3) Press the DATE button. [Within half a second]

4) Press the DATE and REW buttons simultaneously and hold them for 3-5 seconds.

```
xx, x <xx.xx> 199x/xx/xx
      LOD        EJT        UNL
      RSS        UST        RST
      ESS        HLD        EST
      CFG        LST        S30
      TAB        PLY        STG
      ME         TRJ        MP
 □       0 1 2 3 4 5 6 7 8 9 A B C D E F
0000  H: 0 0 0 0 0 0 0 0 0 2 0 0 1 0 0 0
      L: 1 1 0 1 1 1 1 8 0 1 0 0 B D 0 0
xxx/xxx    WYCCOAD  AUDD1 4 0
```

«Results of self-diagnosis»
- The shaded items flash if they are defective.
- See Table 3-1 for the results of diagnosis.

Cautions:
- Do not press any buttons other than those specified during self-diagnosis; otherwise, it may cause a malfunction.
- Only the shaded items are tested in the A mode.
- Other items are ignored.

[To release]
- Set the power switch to "OFF".
- Press the DATE and REW buttons simultaneously.

3.1.2 Results of Diagnosis

Table 3-1 summarizes the results of diagnosis and the circuits/parts deemed to be defective in the A mode.

Table 3-1 Details of A Mode Self-Diagnosis

Part	Display	Results of diagnosis	Parts/circuits deemed to be defective
Trouble sensors	RSS	The pulse from the supply reel sensor is defective.	· Supply reel disk · Trouble sensor (reel sensor) · IC0901
	RST	The pulse from the take-up reel sensor is defective.	· Take-up reel disk · Trouble sensor (reel sensor) · IC0901
	ESS	The pulse from the supply end sensor is defective.	· Trouble sensors (end sensor/end LED) · Q0905 · IC0901 · DC-DC converter circuit (B+ line)
	EST	The pulse from the take-up end sensor is defective.	· Trouble sensors (end sensor/end LED) · Q0905 · IC0901 · DC-DC converter circuit (B+ line)
Cylinder	S30	The SW25 (CYL. FG) pulse is defective.	· Cylinder · IC0631 · IC0901 · DC-DC converter circuit
Capstan	CFG	The CAPST. FG pulse is defective.	· Capstan motor · IC0631 · IC0901 · DC-DC converter circuit

3.2 Mechanical Block Self-Diagnostic Function (B Mode)

Caution: Complete the A mode before engaging the B mode.

3.2.1 Setting Procedure

1) Connect (attach) a power supply (battery).

2) Press the EJECT button to set to the eject state.

3) Press the "Hi-8 MP" switch on the trouble sensor and the DATE button and hold them, then set the power switch to "CAMERA" or "VIDEO" (Hold this state for a few seconds.) [Within 3 seconds].

4) Close the cassette lid.

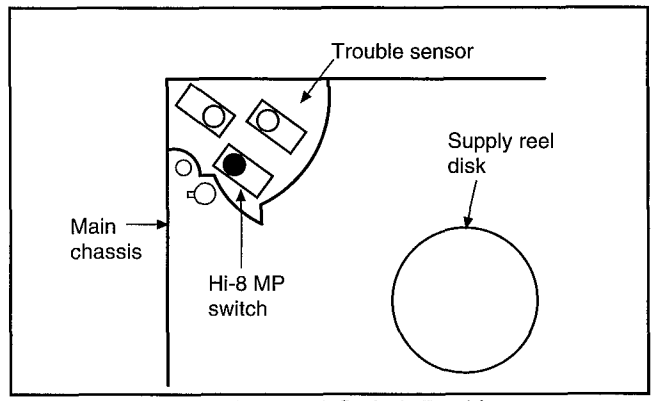
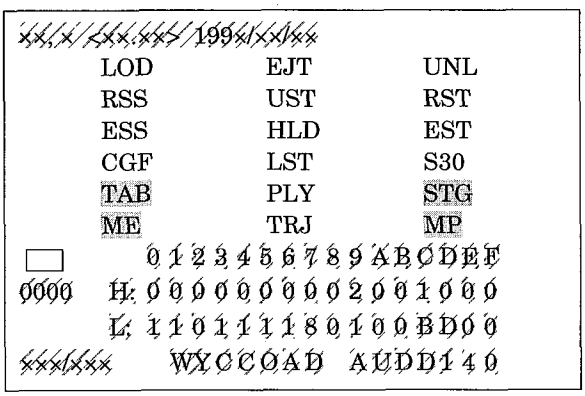


Fig.1-2 Hi-8 MP Switch Position



«Results of self-diagnosis»
- The defective items flash.
- The shaded items are the tape detection switches and cassette holder switch which flash when they are not pressed.
- See Table 3-2 for the results of diagnosis.

Cautions:
- Do not press any buttons other than those specified during self-diagnosis; otherwise, it may cause a malfunction.
- The indications in dotted lines are not covered by the self-diagnostic functions.
- It is normal for the diagnostic procedure to end in the eject state. Do not close the cassette lid thereafter.

[To release]
- Set the power switch to "OFF".

5) The procedure ends in the eject state.
Caution: Do not close the cassette lid.

3.2.2 Results of diagnosis

Table 3-2 summarizes the results of diagnosis and the circuits/parts deemed to be defective in the B mode.

Table 3-2 Results of B Mode Self-Diagnosis (1/2)

Part	Display	Results of diagnosis (Detect display conditions)	Parts/circuits deemed to be defective
Loading motor	LOD	The loading motor is defective when running forward. (Does not load within 10 seconds.)	· Loading motor · Rotation of drive gears in mechanical block faulty. · IC0671 · IC0901 · IC0902 · Power supply (5V, B+) lines.
	UND	The loading motor is defective when runnig in reverse. (Does not unload within 10 seconds.)	
Trouble sensors	RSS	The pulse from the supply reel sensor is defective. (There is one pulse or less withinte two seconds.)	· Supply reel disk · Trouble sensor (reel sensor) · Capstan motor · IC0901

Table 3-2 Results of B Mode Self-Diagnosis (2/2)

Part	Display	Results of diagnosis (Detect display conditions)	Parts/circuits deemed to be defective
Trouble sensor	RST	The pulse from the take-up reel sensor is defective. (There is one pulse or less within two seconds.)	· Take-up reel disk · Trouble sensor (reel sensor) · Capstan motor · IC0901
	ESS	The pulse from the supply end sensor is defective. (No pulse is input for more than 100 ms continuously within two seconds.)	· Trouble sensors (end sensor/end LED) · Q0905 · IC0901 · DC-DC converter circuit (B+ line)
	EST	The pulse from the take-up end sensor is defective. (No pulse is input for more than 100 ms continuously within two seconds.)	· Trouble sensors (end sensor/end LED) · Q0905 · IC0901 · DC-DC converter circuit (B+ line)
Tape detection switches, etc.	TAB	The erase prevention tab detection switch detects the record inhibit state (OFF).	**Caution**: These switches flash when they are not pressed. It is abnormal if they flash when pressed. · Trouble sensor · IC0901
	ME	The ME/MP tape detection switch detects the MP state (OFF).	
	MP	The Hi-8 MP tape detection switch detects the normal MP state (OFF).	
	STG	The cassette holder switch detects the state where the cassette holder is not lowered (OFF).	
Capstan motor	CFG	The CAPST. FG pulse is defective. (150 pulses or less within two seconds.)	· Capstan motor · IC0631 · IC0901 · DC-DC converter circuit
Cylinder	S30	The SW25 (CYL. FG) pulse is defective. (No pulse is input normally within two seconds.)	· Cylinder · IC0631 · IC0901 · DC-DC converter circuit
Mechanism mode switch	UST	The unloading stop position detection signal is defective.	**Caution**: The positions shown on the left are detected in the order described within 10 seconds. · Mechanism mode switch · Trouble sensor · IC0901 · Defective rotation/phase of drive gears in mechanical block. · Loading motor. · Tape transport components. · Guide roller rails · DC-DC converter circuit.
	HLD	The half loading position detection signal is defective.	
	LST	The loading stop position detection signal is defective.	
	PLY	The play position detection signal is defective.	
	TRJ	The transient position detection signal is defective.	
	EJT	The eject position detection signal is defective.	

Demonstration (Demo) Mode

This camera/recorder has a demonstration (demo) mode function.

1. SETTING THE DEMO MODE

The camera/recorder can be set to the demo mode following the procedure below:

1.1 Setting Conditions

1) Connect the AC adapter/charger or a fully charged battery pack.
2) Set the CAMERA/OFF/VCR switch to "OFF".
3) Do not insert a cassette.

1.2 Setting Procedure

Hold the PLAY button down and set the CAMERA/OFF/VCR switch to "CAMERA".

2. EXITING THE DEMO MODE

Perform either of the following to finish (release) the demo mode:

1) Disconnect the AC adapter/charger or battery.
2) Insert a cassette.
3) Set the CAMERA/OFF/VCR switch to "CAMERA".

3. OPERATION DURING THE DEMO MODE

Cautions:

1) The following buttons and switches cannot be used in the demo mode:
   · VCR system:
   PLAY, F.FWD, REW, REC START/STOP
   · Camera system:
   EIS, FADE, DIGITAL EFFECT, FOCUS, INST.ZOOM
2) If the AC input cable is connected while in the demo mode, the demo mode wi ll be interrupted, and the operation mode when the cable has been connected will be maintained.
3) When the CAMERA/OFF/VCR switch is set to "VCR" during the demo mode, the demo mode will be interrupted, and the operation mode when the switch has been changed will be maintained.

3.1 Operation sequence

The following table shows the operation sequence in the demo mode and the display in the EVY (LCD) and on the monitor screen.

Caution:

Only functions provided with specific models will be demonstrated. (T his section describes models provided with all functions of this series of camera/recorder.)

Order	Demo mode	On-screen display	Picture	Remarks
1		No display		Continues one second.
2		DIGITAL		Displays characters every half second.
3		DIGITAL DEMONSTRATION		DEMOSNTRATION is displayed under DIGITAL
4		No display		Continues half a second.
5		DEMO		Lights for a second, and then continues to flash.
6	EIS	EIS indicator and OFF at center	Shakes noticeably in the vertical direction.	For 3 seconds
7		EIS indicator	Shaking lessens.	For 3 seconds
8		EIS indicator and OFF at center	Shakes noticeably in the horizontal direction.	For 3 seconds
9		EIS indicator	Shaking lessens.	For 3 seconds
10	INST.ZOOM	(DEMO flashes)		For 2 seconds
11	(Instant	I.ZOOM indicator	INST. ZOOM is ON	For 2 seconds
12	Zoom)	(DEMO flashes)	INST. ZOOM is OFF	For 2 seconds
13		I.ZOOM indicator	INST. ZOOM is ON	For 2 seconds
14	FADE	White fade indicator	White fade in	The fade modes will switch sequences every demo mode cycle.
15			White fade out	
14'		Wipe fade indicator	Wipe fade in	
15'			Wipe fade out	
14'		Zoom fade indicator	Zoom fade in	
15'			Zoom fade out	
14'		Black-and-white (B&W) fade indicator	B/W fade in	
15'			B/W fade out	

Order	Demo mode	On-screen display	Picture	Remarks
16	16 × 9	16 × 9 indicator	16 × 9 picture	For 2 seconds
17	Negative/positive inversion	NEGPOS indicator	Negative picture	For 2 seconds
18	× 130 zoom	ZM:2 indicator	Magnifies subject up to 130 times.	For 2 seconds
19	Half mirror	MIRROR indicator	Half-mirror picture	For 2 seconds
20	Mosaic	MOSAIC indicator	Mosaic picture	For 2 seconds
21	Normal		Normal picture	For 3 seconds, and then goes back to step 1.

Note: Steps 1-21 will be repeated during the demo mode.

This describes only the differences from the "TH MECHANISM" service manual (No.6406E) issued previously.

DISASSEMBLY

2-1. Cassette holder (Fig.2-1)

1) Move the eject lever in the direction of arrow (A) and set the unit to the eject state.

Caution when reinstalling

· Reinstall the cassette holder so that section (B) of the eject lock slider is inserted into section (C) of the eject lock arm.

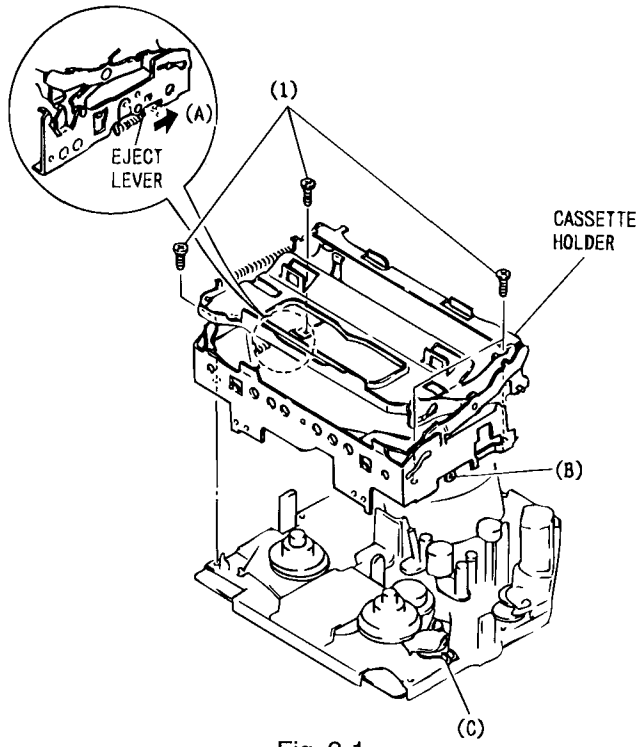


Fig. 2-1

2-3. Loading motor, loading gears (Fig.2-3)

1) Remove two screws (1) holding the loading motor.
2) Remove the loading motor and loading gears (1) and (2) from the chassis in the direction of arrow (A).

Adjustment after reinstalling

· After reinstalling the loading motor and loading gears ((1) and (2)), be sure to preform the following adjustment.
"3. PHASE MATCHING IN ASSEMBLY" in chapter 1.

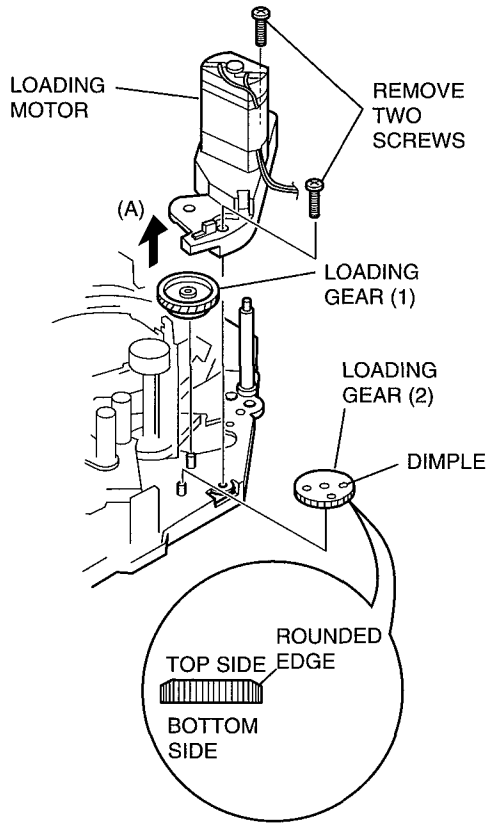


Fig. 2-3

2-12. Chassis plate, Take-up reel disk (Fig.2-13)

1) Remove screw (1) holding the chassis plate.
2) Remove the chassis plate from the chssis.
3) Pull out the take-up reel disk from the take-up reel disk shaft.

Caution when reinstalling

· When reinstalling the chassis plate, make sure the flange covers over the edges of the tension band.

2-13. Eject lock drive arm (Fig.2-13)

1) Remove the eject lock drive arm from the eject lock arm.

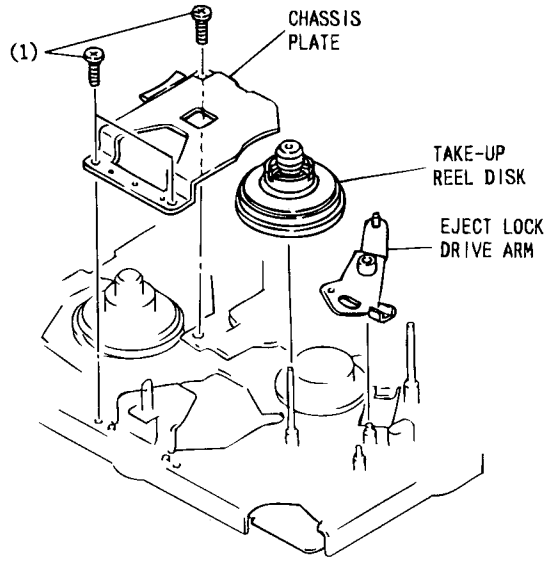


Fig. 2-13

3-2. Loading Gears and Loading Ring

(Figs. 3-2, 3-3)

Caution

· Be careful that the phase of the mechanism state switch which was matched in item 3-1 does not drift.

Procedure of phase matching in assembly

1) Align the markings of the loading ring and gears as hown in Fig. 3-2.

Caution: When reinstalling the pressure roller cam gear, set the eject lock drive arm to the position shown in Fig. 3-3 and check that pin (j) is inserted into groove (J) in the back of the pressure roller cam gear.

Advice: If it is difficult to see marking (D) on the lower loading ring, match the phase by the following procedure.

(1) Set the upper and lower loading rings to the state shown in Fig. 3-2. (Watch the guide roller fixing section.)

(2) Move the upper and lower loading rings so that holes (H) overlap each other.

(3) If holes (H) overlap each other, the phase of the loading ring is correct.

(4) If holes (K) overlap each other, the phase of the loading relay gear (4) is correct.

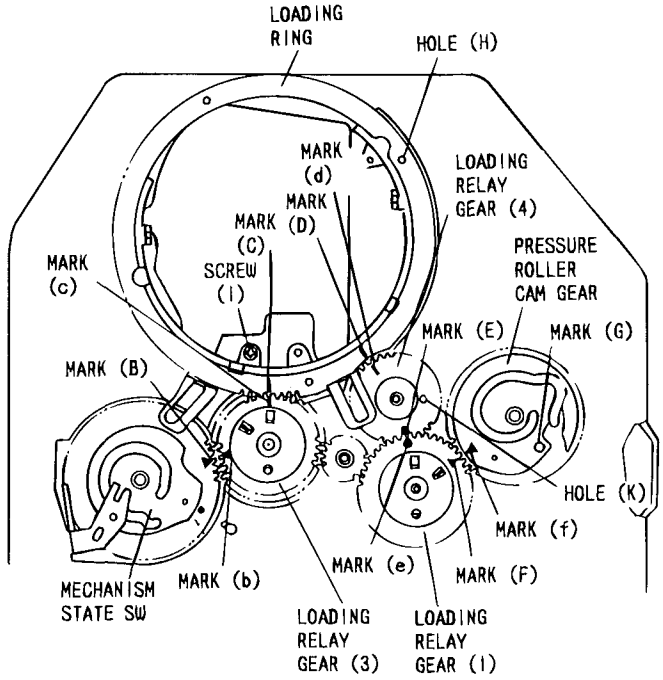


Fig. 3-2

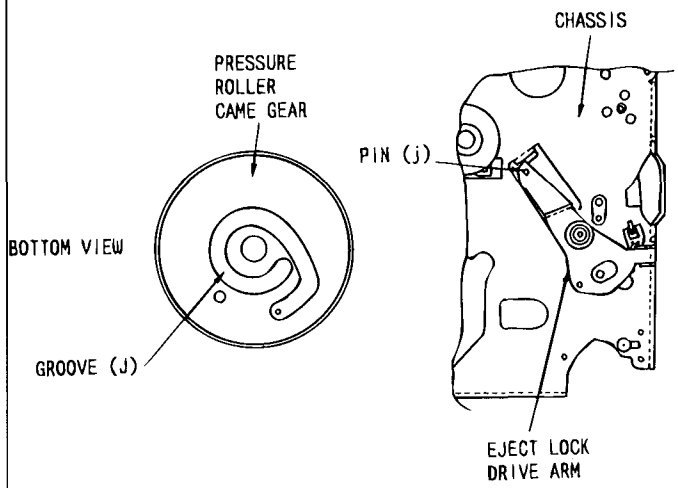


Fig. 3-3

4. PHOTOS OF MECHANISM

·Refer to these when reinstalling and perform phase matching in assembly.

4-1. Top View of Mechanism

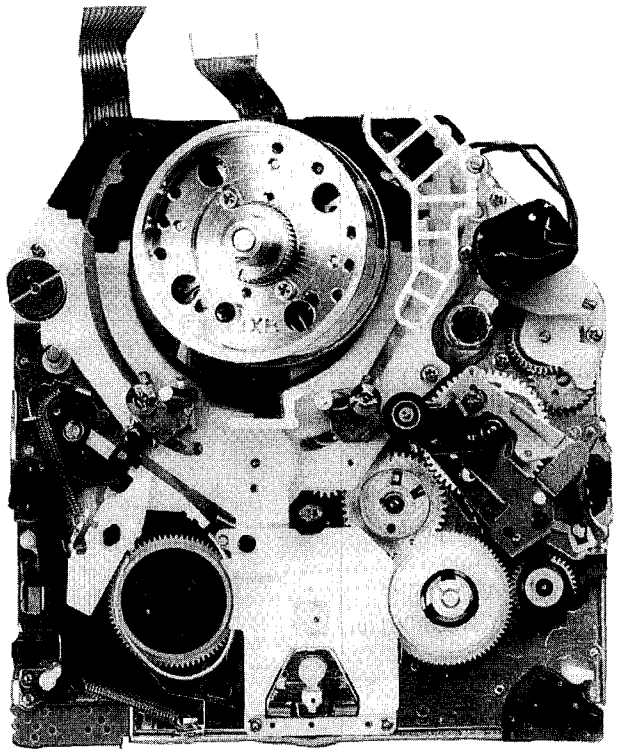


Fig. 4-1

4-2. Bottom View of Mechanism

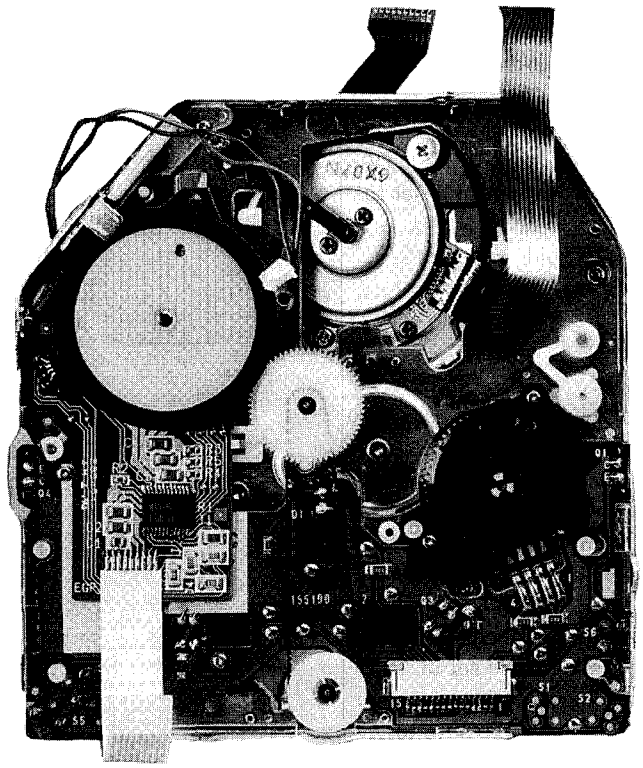


Fig. 4-2

MECHANISM ADJUSTMENT

3-3. Supply/Take-up Guide Roller Height Adjustment (Figs. 3-4, 3-5)

Caution

· Be sure to check this item after reinstalling the supply guide roller and take-up guide roller. Basically, the height of the supply/take-up guide rollers should not be adjusted. Adjust these heights only if they are abnormal.

Test equipment/jigs	Test equipment/jigs connection points	State of VCR	Adjustment point
· Alignment tape · Oscilloscope · ATF-R jig · Special driver	· Test Plug on Main board · TP1(SW25/30) on ATF-R jig · TP2(GND) on ATF-R jig · TP3(FM OUT) on ATF-R jig	· Connect the ATF-R jig to test plug. · ATF-R jig (SW1: OFF, SW3: ON, RT1: mechanical center)	· Top of guide rollers

Adjustment procedure

Caution: Before performing this adjustment, refer to Fig. 6-1 and modify the ATF-R jig. Connect the ATF-R jig before suppling power.

1) Load the alignment tape which has been completely rewound, and holding down the playback button, supply a DC power source (7.2 V). Set the power switch of the camcorder to OFF at this time.
2) Connect an oscilloscope to TP3 on the ATF-R jig.
3) Synchronize the oscilloscope with TP1 (SW25/30) on the ATF-R jig.
4) Set the osilloscope to (+) slope.

Supply Guide Roller (Fig. 3-4)

5) Press SW2 on the ATF-R jig and hold it, then perform the following steps.
6) Adjust the height of the supply guide roller so the waveform is flat.
7) Adjust the voltage level control of the oscilloscope so that portion (A) of the waveform is set to 4 graduations.
8) Set SW1 on the ATF-R jig to ON.
9) Turn RT1 on the ATF-R jig counterclockwise so the voltage at point (C) on the ATF-R jig is 1.8 ± 0.1V. Then check that point (B) of the waveform is set to 3 graduation.
10) Adjust the height of the supply guide roller so minimum amplitude of the waveform is set to NTSC:2.3 ± 0.3/PAL:2.5 ± 0.3 graduations.

Take-up Guide Roller (Fig. 3-5)

11) Set the oscilloscope to (-) slope.
12) Adjust the voltage level control of the oscilloscope so that portion (B) of the waveform is set to 4 graduarions.
13) Turn RT1 on the ATF-R jig counterclockwise so the voltage at point (C) on the ATF-R jig is 1.8 ± 0.1V. Then check that point (B) of the waveform is set to 3 graduation.
14) Adjust the height of the take-up guide roller so the minimum amplitude of the waveform is set to NTSC:2.5 ± 0.3/PAL:2.3 ± 0.3 graduations.

Caution: After adjustment is completed, be sure to reverse the modification to ATF-R jig.

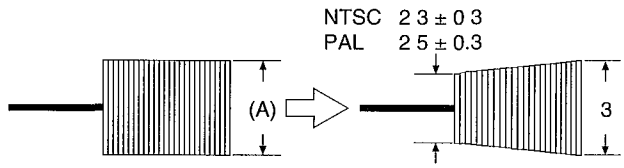


Fig. 3-4

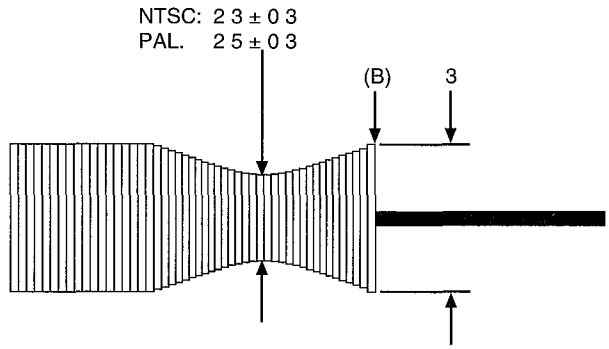


Fig. 3-5

4. ADJUSTMENT AFTER REPLACING THE CYLINDER (Figs. 4-1, 4-2)

When the cylinder is replaced, the height relative to the guide roller drifts, therefore the tape transport system and servo circuit should be adjusted. Check and adjust in the following order.

Test equipment/jigs	Test equipment/jigs connection points	State of VCR	Adjustment point
· Alignment tape · Oscilloscope · ATF-R jig · Special driver	· Test Plug on Main board · TP1(SW25/30) on ATF-R jig · TP2(GND) on ATF-R jig · TP3(FM OUT) on ATF-R jig	· Connect the ATF-R jig to test plug. · ATF-R jig (SW1: OFF, SW3: ON, RT1: mechanical center)	· Top of guide rollers

Adjustment procedure

Caution: Before performing this adjustment, refer to Fig. 6-1 and modify the ATF-R jig.

1) Load the alignment tape which has been completely rewound, and holding down the playback button, supply a DC power source (7.2 V). Set the power switch of the camcorder to OFF at this time.
2) Connect an oscilloscope to TP3 on the ATF-R jig.
3) Syncronise the oscilloscope with TP1(SW25/30) on the ATF-R jig.
4) Set the oscilloscope to (+) slope.
5) Press SW2 on the ATF-R jig and hold it, then perform the following steps.
6) Adjust the voltage level control of the oscilloscope so that portion (A) of the waveform is set to 4 graduations.
7) Set SW1 on the ATF-R jig to ON.
8) Turn RT1 on the ATF-R jig counterclockwise so that portion (A) of the waveform is set to 3 graduations.
9) Adjust the height of the supply guide roller so the minimum amplitude of the waveform is set to NTSC:2.3 ± 0.3/PAL:2.5 ± 0.3 graduations. (See Fig. 4-1)
10) If this cannot be confirmed, adjust the height of the supply guide roller, referring to "3-3. Supply/ Take-up Guide Roller Height Adjustment".
11) Set the osilloscope to (-) slope.
12) Turn RT1 on the ATF-R jig counterclockwise so the voltage at point (C) on the ATF-R jig is 1.8 ± 0.1V. Then check that point (B) of the waveform is set to 3 graduation.
13) Check that the minimum amplitude of the waveform is set to NTSC:2.3 ± 0 3/PAL:2.5 ± 0.3 graduations. (See Fig.4-2)
    If this cannot be confirmed, adjust the height of the take-up guide roller, referring to "3-3. Supply/ Take-up Guide Roller Height Adjustment".
14) Perform the following electrical adjustments.
    ·Head switching point adjustment
    ·Record luminance/chroma level adjustment

Caution: After adjustment is complete, be sure to reverse the modification to ATF-R jig.

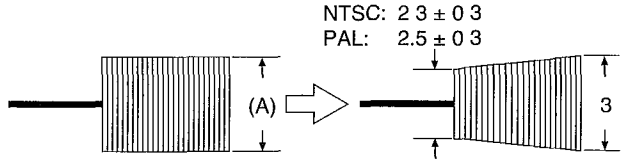


Fig. 4-1

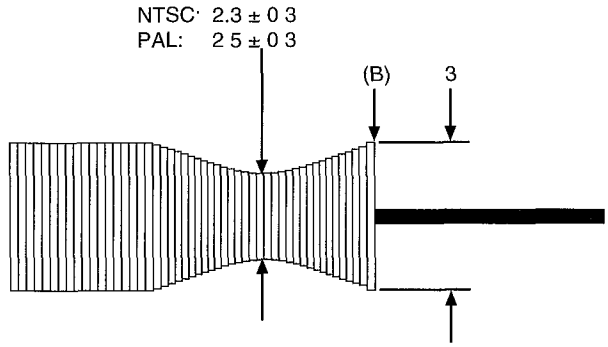


Fig. 4-2

5. CHECKING THE TORQUE

There are two types of cassette torque meter.
Choose the applicable one for the measurement to be performed.

Item	VCR mode	Measured reel disk	Torque value	Torque cassette used
Take-up torque	Playback	Take-up	7-13 g-cm	SRK-8T-212 SRK-8T-232
Rewind torque	Reverse search	Supply	25-37 g-cm	SRK-8T-232
Take-up brake torque	Reverse search to stop	Take-up	10 g-cm ro more	SRK-8T-212 SRK-8T-232
Slack removal torque	Unloading	Supply	25-37 g-cm	SRK-8T-232

6. MODIFICATION TO ATF-R JIG (Fig. 6-1)

Caution

The ATF-R jig must be modified for the following adjustments.
After completing these, be sure to reverse the modification.

- 3-3. Supply/Take-up Guide Roller Height Adjustment
- 4. ADJUSTMENT AFTER REPLACING THE CYLINDER

Procedure

1) Short terminal (A) of the resister on theATF-R jig and pin 1 (5V) of the connector.

Note: This modification makes SW2 on the ATF-R jig a PCM area observation switch.

Caution: Use a shorting clip, etc. to short the parts; this can be removed easily after adjustment is completed.
A modification is also necessary in the same way when the ATF jig is used.

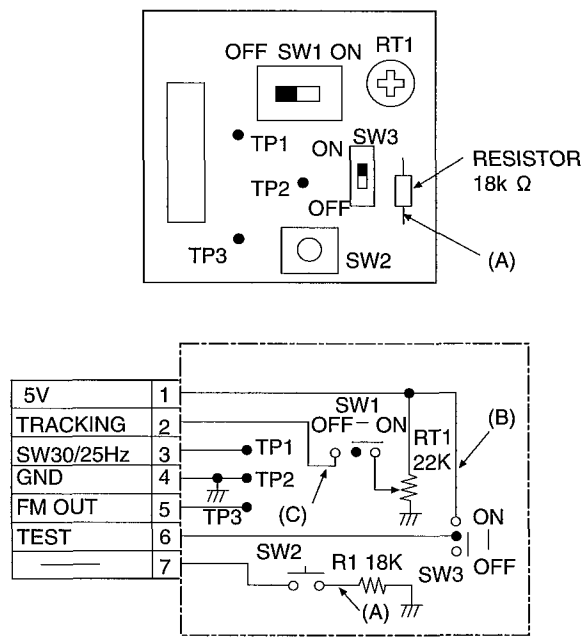
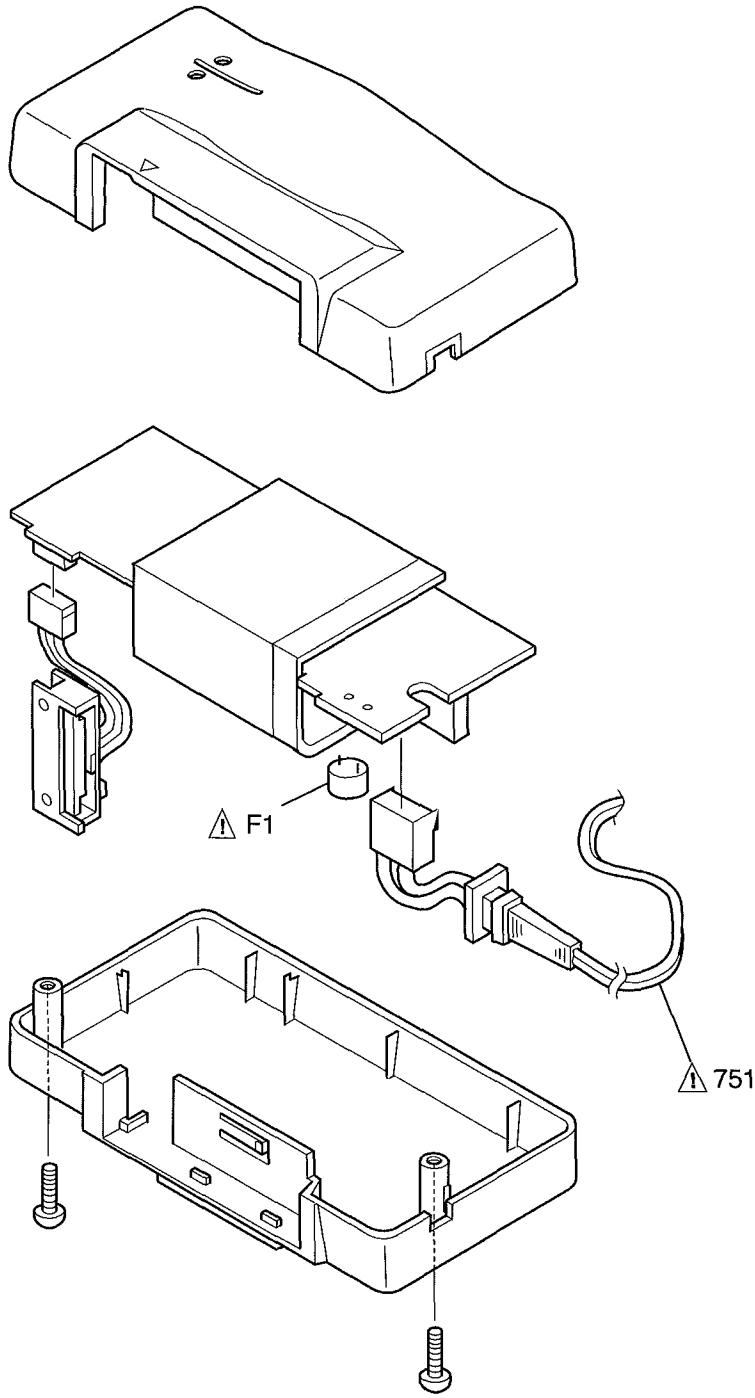


Fig. 6-1

CHAPTER 8 VM-ACE4E (AC ADAPTER/CHARGER)

EXPLODED VIEW & REPLACEMENT PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
⚠ 751	EV10452	CORD, POWER (For UK)
⚠ 751	EV10462	CODE, POWER (For AU)
⚠ 751	EV10442	CODE, POWER (Except for UK, AU)
⚠ F1	FN10261R	FUSE 1.6A



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